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Benign and Malignant Tumors of the Rectosigmoidal Region

• Samuel G. Gant, M.D., LL.D., New York, N. Y.

SINCE the purpose of this paper is a brief consideration of the symptomatology, diagnosis and treatment of *true*—benign and malignant—anorectal neoplasms, their etiology and histology have been omitted and the writer has also refrained from discussing hemorrhoids, procidentia recti, cysts (retention and dermoid), encysted foreign bodies and anorectal tumors resulting from tuberculous, parasitic and inflammatory deposits (blind abscess—fistula), occasionally mistaken for simple and malignant neoplasms.

Anorectal tumors vary greatly in appearance, location and structural composition. They may be encountered superficially or in deeper tissues at the anus or within the anal canal and rectum.

True anorectal neoplasms may be *benign* or *malignant* and one type is encountered about as frequently as the other in adults, but in children the former predominates.

Benign Tumors and Cysts:—Non-malignant tumors of the anorectal region may be *congenital* or *acquired*, are encountered more often in women than men, usually between the ages of twenty-five and forty-five, and may cause slight discomfort, considerable pain or terminate fatally as a result of exhaustion, infection, hemorrhage from sloughing of the tumor, or intestinal obstruction.

Benign tumors grow slowly, involve superficial tunics of the bowels, do not infiltrate adjacent structures, are not complicated by rapid loss in weight, metastasis or cachexia, seldom recur when extirpated, possess a systematic cell arrangement and are usually composed of connective, glandular, muscular or adipose tissue alone or intermingled.

"Innocent" neoplasms are sometimes *benign* at one and *malignant* at another point. Non-malignant growths encountered throughout the gastrointestinal tract are met with in the rectum five times as often as in the small intestine or colon and may be disseminated throughout the large intestine, but are more numerous and largest in the sigmoid and rectum.

These tumors may degenerate into cancer from irritation induced by cathartics, prostatic massage,

intestinal discharges, constipated stools and the employment of patented pile cures.

Benign growths, rare in babies, are occasionally encountered in children and young adults suffering from coloproctitis, worms or chronic discharges.

Characteristics:—Benign anorectal tumors having *pedicles* are called *polyps* whether their distal extremity is pointed, bifurcated or enlarged, and the terms *adenoma*, *lipoma*, *fibroma*, *myoma*, *lymphoma*, *myxoma* and *angioma* are employed to designate the pathology of the neoplasm.

"Innocent" tumors having a broad, thickened attachment are in the *transitional* stage. It is a safe rule to classify *pedunculated* as *benign* and tumors having a broad indurated base as *cancerous*.

In the beginning they resemble papillae but later enlarge, develop a pedicle, project downward into the bowel, or they may extrude through the anus, due to their weight, straining and the downward drag of feces.

Benign tumors vary in location, number, length, size, shape, density and color, possess a smooth or ragged surface, and a blunt or irregularly shaped extremity.

Adenomas (reddish) and *fibromas* (whitish) constitute the majority of polyps or simple anorectal tumors, but occasionally *adenolipomas*, *adenomyomas*, *adenolymphomas* and *adenomyxomas* are met within the rectum.

Fibromas usually remain benign but adenomas frequently develop into cancer. When a complication of chronic ulcerative colitis, adenomas are often numerous and disseminated throughout the colon, a condition designated *polyposis*.

Symptoms:—Manifestations arising from polyps (*adenomata*, *fibromata*, etc.) depend upon their causation, number, size and location, complicating ulceration and whether or not they protrude.

Large or obstructing neoplasms (Fig. 1) induce obstipation, muco-bloody discharge, retention of gas, sacral pain and constant desire to go to stool. Small tumors and polyps are accompanied by a tingling sensation, a feeling as if there were a foreign body in the rectum, frequent incomplete evacuations, and marked sphincterismus when they extrude through the anus.

Read before the Greenville (South Carolina) Medical Society, March, 1934.

Patients thus afflicted are nervous but do not develop cachexia or lose weight. Very large adenomas (Fig. 2) cause obstruction, induce constipation, interfere with digestion, prevent sleep, and induce almost continuous abdominal, sacral and bearing-down pain unrelieved by defecation. When growths are numerous throughout the large intestine (polyposis), and complicated by ulcerative

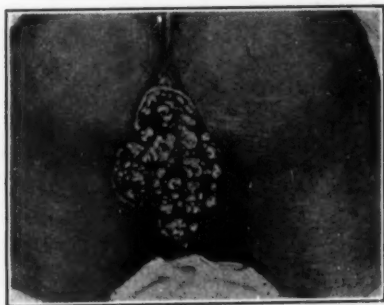


Fig. 1.—Extruded large (fist-sized) adenoma that caused almost complete obstruction.

colitis, frequent fluid evacuations containing pus, blood and mucus greatly add to the patient's discomfort.

Diagnosis:—Benign tumors or polyps, owing to their narrow attachment, lengthy pedicle and irregularly shaped extremity, are readily diagnosed by digital examination and proctoscopic inspection. There is no excuse in mistaking them for pointed *papillae* located at the anal margin; *hemorrhoids* are globular in contour, purplish in hue and pliable in consistence; the tumor mass of *proctidentia recti* is large, soft, cone-shaped, wrinkled and involves the entire circumference of the rectum; *dermoids* are recognized through their sacral connection; *retention cysts* are diagnosed by their smooth elastic feel.

Malignant neoplasms are distinguished from polyps by their large size, odor, firm nodulated surface, crater-like ulcers and broad indurated infiltrating bases, accompanying cachexia, gland metastasis and non-pedunculated attachment.

Treatment:—Spontaneous cure has followed the breaking off of pedunculated tumors by feces or strangulation of their pedicles by the sphincter; otherwise their radical treatment is surgical.

Skin polyps and pedunculated tumors within the anal canal are drawn down and removed by ligation and amputation with clamp and cautery or by excision, suture and drainage following their anesthetization with novocain. Wide dissection is seldom required because of the pedunculated character of these neoplasms.

Small high growths may be eliminated with a snare or valve-clamp, or by fulguration. Large growths in the lower rectum are drawn down, ligated and amputated under novocainization (Fig. 2). High pedunculated neoplasms can not be reached for excision but are easily destroyed, with the aid of an operating speculum, by clamping their attachment with pressure forceps (having detachable handles) left *in situ* until the growths slough off.

Rectal extirpation is occasionally indicated where tumors are numerous and large or degenerating into cancer. In one instance the writer performed colostomy to relieve acute intestinal obstruction caused by an enormous adenoma located at the rectosigmoidal juncture.

Malignant Neoplasms:—Clinically there are two characteristic types of malignant neoplasms encountered in the rectosigmoidal region, viz.: sarcomas and carcinomas.

Sarcomas:—These neoplasms, relatively frequent in children and young adults, originate in connective tissue and are characterized by excessive development of embryonic cells separated by granular or fibrillary substance. In the writer's 14 cases they were variously located, namely: colon 1, sigmoid flexure 1, rectum 4 and peri-anal region 8.

Sarcomas usually originate outside the bowel as broad, smooth, massive tumors that later ulcerate and encroach upon the rectum, causing extensive ulceration or obstruction. When dominated by lymphoid tissue they are designated *lymphosarcoma* and when black as *melanotic sarcoma*. Owing to their rareness and tendency to recur following extirpation their further discussion will be omitted.

Carcinoma: True cancer is an organoid neoplasm of uncertain origin characterized by a vascular connective tissue stroma forming alveoli, containing proliferating epithelial cells, variable in size and shape, having a tendency to destroy adjacent tissue, produce metastasis and recur following extirpation. There are two distinct types of true epithelial cancer (1) *squamous*—flat pavement-celled epithelioma; (2) *cylindric*—columnar-celled carcinoma.

Epithelioma originates at the anus, is rare, not very malignant, grows slowly and causes metastasis

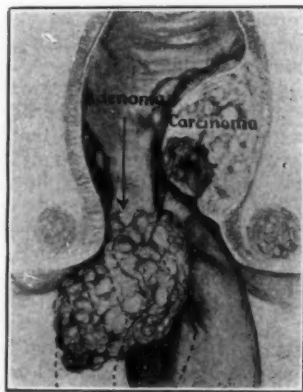


Fig. 2.—Showing characteristics and differential diagnostic appearance of rectal carcinoma (right) and pedunculated adenoma (left).

late; while *cylindric-celled carcinoma* begins in the rectum, spreads rapidly, is complicated earlier by metastasis and recurs following extirpation more frequently than squamous-celled cancer.

To avoid confusion the writer will apply the terms *epithelioma* to *pavement-celled anal cancer*, and *carcinoma* or *adenocarcinoma* to *cylindric-celled* or *rectal cancer*.

In 300 of the writer's consecutive anorectal cancer patients tumors were encountered in the rectum

and sigmoid flexure in 95 and at the anus in 5 per cent. of the cases.

Epitheliomas originate at the mucocutaneous juncture or in peri-anal skin as an ulcer or wart-like nodule that shortly degenerates. When neglected epitheliomas present as extensive sensitive ulcers having a violaceous hue, grayish base, and a raised, reddish, fluted, irregular, indurated border. They progress slowly, develop metastasis late, and if not radically treated eventually destroy, partially or completely, the perineum, labia and lower rectum. In rare instances these lesions scab over or form cicatrices healing in one direction as they extend in another direction, and seldom appear as smooth nodular tumors like carcinomas.

Carcinomas in the beginning resemble *adenomas* and because of their similarity in structural composition and the tendency of the latter to degenerate into cancer they are often referred to as *adenocarcinomas*. Cylindric-celled cancers vary in size, shape and consistence and while encountered in all parts of the lower bowel they most frequently attack the middle and upper segments of the rectum and, unless circular, most often involve the anterior or posterior wall. Soft (medullary-encephaloid-colloid) tumors develop more rapidly than hard (scirrhous) tumors containing an abundance of connective tissue. Carcinomas may extend by direct involvement of adjacent structures or cancer cells may be transported through lymphatics to near-by glands or distant organs.

Metastasis and *cachexia* are observed later in rectal cancer than elsewhere, and are less marked in scirrhous (hard) than in medullary (soft) growths. Melanotic (black) carcinomas marked by dark or brown pigment are characterized by their softness, extreme malignancy, tendency to bleed and an offensive, dark-colored discharge.

Symptoms.—Early manifestations of anorectal carcinoma are distress in the pelvis, gas in the abdomen and digestive disturbances.

Named in the order in which they are encountered the chief symptoms observed during the middle, late and final stages of anorectal cancer are: Constipation, weight and fulness in the bowel, bearing-down pain, straining, malformed stools, tympanites, abdominal soreness, alternating constipation and diarrhea, offensive discharge composed of mucus, pus, blood and tissue *débris*, partial obstruction, vesical, urethral and prostatic disturbances, marked loss in weight, cachexia, metastasis, fecal incontinence, sphincterismus and excoriation of the peri-anal skin caused by an irritating discharge.

In addition to the above, patients usually complain of slight or profuse bleeding, pain in the sacral and pelvic regions and constant desire to go to stool which is unrelieved by defecation.

Diagnosis.—Usually, physicians mistakenly treat malignant anorectal neoplasms for hemorrhoids, constipation, diarrhea, or other rectocolonic disease until marked loss of weight, cachexia, and recurring hemorrhage or obstruction are evident, by which time the patient is often beyond help. This is inexcusable, since by studying symptoms, palpating the peri-anal region, digitally examining the rectum and inspecting the bowel through the proctoscope cancer in this region is easily located and diagnosed

and the progress and characteristics of the growth accurately determined.

Carcinomatous tumors, which are usually large and nodular, with broad bases, have been mistaken for hyperplastic tuberculosis, dermoids, syphiloma and inflammatory deposits resulting from fistula, abscess, parasitic infection and encysted foreign bodies. They are seldom taken for epitheliomas, which attack the lower rectum or peri-anal skin as ulcers or wart-like excrescences, break down and extend by contiguous ulceration.

Radiographs and fluoroscopic examination are unnecessary for anorectal malignancy but are useful in diagnosing sigmoidal and colonic cancer. Typical benign tumors are easily differentiated from malignant neoplasms with finger and proctoscope, but when adenomas are degenerating microscopic examination is necessary to determine whether or not they have reached the cancerous stage. Non-malignant growths are easily distinguished from cancerous tumors because of their mobility, narrow pedunculated (Fig. 2) attachment and absence of cachexia, metastasis and loss in weight. Rectal strictures are recognized by the patient's history, slow formation, abundance of cicatricial tissue and the ring-like feel given to the examining finger.

The writer's operability in 300 cases of anorectal cancer reported in 1923¹ was 65 per cent., but is now 75 per cent., owing to improved diagnostic and operative technic. With his present method of extirpating cancer, the size of the growth and the length to which it involves the gut make little difference, and all cases are considered operable unless structures or organs outside the rectum have been attacked. Moderate involvement of the prostate or vagina does not necessarily make the case inoperable.

The mortality of rectal extirpation is extremely high for the novice and low for the experienced surgeon. The writer's mortality in recent years for perineal excision has been approximately 5 per cent., and in fatal cases pelvic organs were extensively involved. Death has not followed the extirpation of anal epitheliomas.

The *prognosis* is greatly improved since the writer abandoned other procedures for perineal excision and cures are now approximately 28 per cent., based upon patients still well and those who lived five years or longer.

Recurrence is observed more frequently in patients under 30 than over 50 years of age and is more frequent when connecting glands and lymphatics are not removed. The bowel is severed close to the growth in an attempt to preserve the sphincters, the rectum is resected or the operation is completed without mobilizing the bowel through dividing peritoneum.

Treatment.—Palliative measures, viz.: tonics; regulating the diet, procuring comfortable stools with oils and laxatives, relieving insomnia, prescribing acetylsalicylic acid and opiates for pain, employing irrigation to clean out irritating discharges and using electrotherapy to minimize discomfort are justifiable in *inoperable* anorectal cancer cases.

¹ GANT—Diseases of the Rectum, Colon and Anus, 1923.

When extirpation is impracticable and the patient develops acute obstruction immediate permanent colostomy is imperative.

Non-Surgical Curative Agents such as radium, x-rays, cauterization and corrosive pastes occasionally destroy anal but rarely if ever cure rectal cancer. *Roentgenotherapy* diminishes pain but radium capsules in the rectum materially increase suffering through causing acute proctitis and spasms of the sphincter and levator muscles.

In two instances (rectosigmoidal) the writer has observed decided alleviation of symptoms and marked reduction in the size of cancers following the implantation of gold radium seeds into the tumor masses. In three other cases of ano-epithelioma a cure followed direct application of radium to the growth.

Roentgenotherapy is useful for lessening pain preceding operation and for destroying wandering cancer cells following extirpation of anorectal cancer, but is not curative in this class of cases.

Surgical Treatment:—Rectal carcinomas have been removed by the *perineal*, *sacral*, *vaginal* and *abdominoperineal* routes. Experience in more than three hundred rectal excisions has convinced the writer that the *perineal* is far superior to other excisions and should be selected in preference to them except where growths extensively involve both rectum and sigmoid and cannot be extirpated except by the aid of abdominal exploration.

Rectal *resection* has been abandoned because fecal fistula usually results and attempts to *preserve the sphincter* have been discontinued since controlling nerves are destroyed during extirpation of the growth. Removal of neoplasms without *dividing peritoneum* is no longer attempted since it necessitates amputating the bowel at an *unsafe* distance from the cancer.

With gut freed from muscles, ligaments, fascia and the peritoneum one can easily withdraw from six to eighteen inches of the bowel down through the perineal incision owing to the mobility and length of the sigmoid flexure. This procedure enables the operator to (a) amputate the intestine well above the growth whether it involves the rectum or the lower half of the sigmoid, and to (b) remove lymphatics, glands and fat lying posterior to the rectum and in the sigmoid mesocoln and to anchor the gut at the anal site without tension.

Following three hundred rectosigmoidal extirpations, recurrence was observed in the sigmoidal region in but two instances, though enlarged glands were frequently noted.

Ample experience warrants the writer in holding that such glands are more often involved by simple *inflammatory* than by *cancerous* infection. If this is so, *perineal* should take precedence over *combined excision* because in the latter mortality is high, recurrence is equally frequent, the operation requires double the time, and is more dangerous because pneumonia, kidney manifestations, paralytic ileus, profound shock, secondary hemorrhage, abdominal adhesions and hernia are occasional complications.

Most important of all to the patient, however, is that abdominoperineal extirpation leaves him with

a permanent fecal opening in the abdomen through which feces involuntarily escape, while after perineal extirpation he is left with an 80 per cent. controllable anus at the normal site which allows him to occupy a toilet seat during evacuations.

Vaginal has been discarded for perineal extirpa-

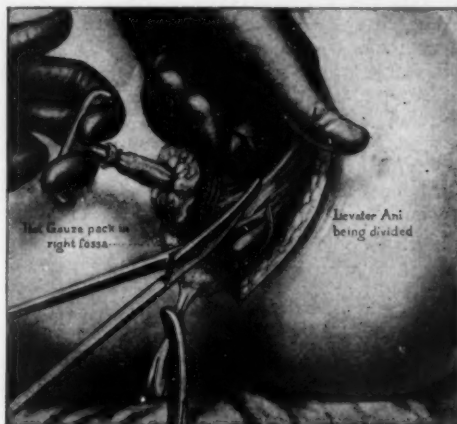


Fig. 3.—Showing method of freeing bowel in Gant's perineal excision for cancer.

tion because splitting of the vagina and perineum are unnecessary to provide room and the operation is frequently followed by rectovaginal fistula.

Sacral (Kraske) excision has been abandoned because it is brutal, has a higher mortality than perineal excision and is accompanied or followed by profound shock and genito-urinary disturbances, while the painful and prolonged convalescence leaves the patient with an inconveniently located and uncontrollable anus through which the gut extrudes and the operation is lengthy and accompanied by profound bleeding.

Perineal Excision:—The patient having been properly prepared and the rectum and buttocks painted with iodine, the following comprise the basic steps in the operation as performed by the writer:

First Step:—The anus is closed by an encircling suture of strong linen and caught up with volsellum forceps. *Second Step:* The lower rectum is detached through deep peri-anal incisions that join in front and behind the anus. *Third Step:* Connecting muscles and fascia are hooked up with the index finger and severed on all sides by bold scissors strokes (Fig. 3) which quickly free the bowel. *Fourth Step:* After traction forceps have been adjusted, using finger tip and blunt scissors, the rectum is dissected from the vagina or prostate. *Fifth Step:* High lying muscles, ligaments and fascia are severed up to the serosa with scissors which point toward the bowel anteriorly and laterally and away from it posteriorly to avoid cutting important vessels. *Sixth Step:* Bleeding is controlled by tightly packing taped-gauze compresses wrung out of boiling-hot water about the detached gut. *Seventh Step:* Following removal of gauze packs the rectum is mobilized by dividing remaining fascia, ligaments and the peritoneum on all sides with blunt scissors guided by the index finger. *Eighth Step:* Under

gentle traction the rectum and sigmoid are drawn down through the perineal incision for from four to eighteen inches or more, according to indication (length and location of the cancer), as remaining bands and the mesosigmoid are severed. *Ninth Step:* After restraining forceps have been adjusted and the gut amputated with Paquelin cautery, a large rubber tube six inches in length is introduced and the bowel is tightly ligated about it with strong linen. *Tenth Step:* Oozing is controlled with hot packs and spurting vessels are ligated. *Eleventh Step:* Vaseline-covered gauze or rubber tissue drainage strips are introduced posteriorly and anteriorly. *Twelfth Step:* The bowel is anchored and the wound edges loosely approximated to it with from two to four linen stitches. *Thirteenth Step:* The operation is completed by placing perforated gauze pads supported by a T-binder about the tube, which is left projecting through dressings to minimize danger from infection when feces escape. Fig.

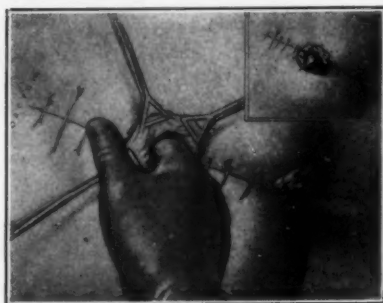


Fig. 4.—Showing method of dealing with bowel when tube is used (upper) and when gut is attached to skin.

4 shows the method of attaching the bowel to the skin when the tube is not employed.

Advantages of Perineal Extirpation:—(1) the operation is performed in from twenty to thirty minutes and is applicable to cancer located in the rectum and lower sigmoid; (2) the rectum and lower sigmoid with connecting fat and lymphatics are removed; (3) serious complications of the combined excision above enumerated are avoided; (4) bleeding is insignificant; (5) shock is nil; (6) convalescence is short; (7) postoperative complications are rare; (8) a fairly controllable anus is left at the anal site; (9) mortality is low, and (10) recurrence is no more frequent than following the combined operation.

The after treatment consists in raising the foot of the bed, keeping the patient comfortable with opiates and feeding him soup and egg-noggs until removal of the tube and drainage packs on the fifth day, when he is allowed a regular diet. Thereafter soft stools are procured with mineral oils. The wound is daily mopped with methylene blue (10 per cent.) and the finger is inserted from time to time to regulate the size of the opening.

Continence is difficult to obtain following rectal extirpation but in the writer's perineal operations there has been complete control in ten, continence of solid feces in eighty and nearly complete incontinence in ten per cent. of the cases. Best results

follow when healing is regulated so that an index finger-sized opening is left. Hernia is prevented by vaselined drainage packs inserted about the bowel.

Complications seldom follow simplified perineal excision. In 350 extirpations (all kinds) the ureter was uninjured, the bladder was perforated twice, the vagina punctured three times and the urethra injured in two instances.

On two occasions segments of the prostate were intentionally removed with the growth. In 60 recent perineal excisions oozing occurred five times and copious hemorrhage twice, which was controlled by repacking the wound in one and ligating the vessels in the other case. In one instance the superior hemorrhoidal artery was injured, clamped, and the operation completed by bringing the freed gut out through an abdominal incision and forming an artificial anus.

In conclusion, the writer wishes to emphasize the simplicity and effectiveness of perineal excision and to recommend the operation over all other procedures in the removal of rectosigmoidal cancers, and would call attention to the fact that on six occasions he has successfully extirpated malignant neoplasms situated in the lower half of the sigmoid by the perineal route.
501 Madison Avenue.

Undergraduate Teaching of Gastro-Enterology in American Medical Schools

In an effort to suggest an improvement in the teaching of gastro-enterology in medical schools, ALBERT F. R. ANDERSEN, Brooklyn (*Journal A. M. A.*, Aug. 25, 1934), presents an outline of a comprehensive course in gastro-enterology covering the disorders of digestion through the average four-year course in medicine. The instruction should be planned and carried out by trained gastro-enterologists functioning as a separate department. This should not be in the nature of an intensive post-graduate course, but its aim should be to acquaint the student with the symptoms of the most common gastrointestinal diseases, the methods of study and the principles underlying treatment. A constant reference to the physiologic principles involved helps to fix the subject in the student's memory and makes it easier for him to work out his own cases. The preclinical work will involve no extra expenditure of time but merely a rearrangement of present schedules. The time devoted to gastro-enterology in the clinical years should consist of from twelve to fifteen hours of preliminary lectures and from four to eight hours of later clinical lectures to the entire class. The minimal number of hours spent in the gastro-enterologic clinic should be from twelve to fifteen. The exact time devoted to ward assignments cannot be accurately estimated, but the small group conferences should embrace at least twelve to sixteen hours, and the dietetic and roentgenologic conferences should take another six to twelve hours. The plan, therefore, for a unified study of gastro-enterologic problems involves the assignment of at least forty-six hours to this subject, which is still considerably less than 10 per cent of the time devoted to internal medicine in some schools and less than 5 per cent in many. The importance of the subject would surely warrant the expenditure of at least 15 or 20 per cent of the time. The importance of gastro-enterology as a teaching problem has been demonstrated by the Final Report of the Commission on Medical Education in its conclusions in regard to the prevalence of digestive diseases in general practice. The medical schools of the country have not yet become cognizant of its importance, and the teaching of this important subject is woefully neglected in all but a few schools. The commission has called attention to the value of having the specialist do the teaching in his special subject.

Uroscopy (The Gross Examination of the Urine): A Lost Art—A Teaching Responsibility of the Urologist

• Augustus Harris, M.D., F.A.C.S., Brooklyn, N. Y.

THE riches we now possess in modern paraphernalia for diagnostic investigation often induce neglect of valuable, time-honored means of extreme simplicity. One of the most cogent examples of this neglect applies to the study of the urine. For this reason the writer has chosen to present, for your consideration, the fundamental subject of uroscopy. It seems essential, before proceeding with our subject, to outline briefly the early history of the art.

Historical Survey

A review of the history of uroscopy reveals one of the most interesting and entertaining chapters in medical history. Although the method is said to have been practiced by the ancient Chinese, Hindus and Arabs, it reached the height of its popularity in the medieval period and the early Renaissance. At this time, so-called water-casting was so much in favor and popularity that the urinal became the emblem of medical practice and specimens were carried in a characteristic flask, sometimes graduated, and placed in an osier basket with lid and handle somewhat resembling a champagne basket. Many early Dutch masters of the period found it a favored way to depict the physician, priest or monk examining the graduate before the light, usually with the sickly-looking patient standing beside. One of them in particular showed a woman with mal d'

amour or the chlorosis of love-sick women. Rosenbloom was able to collect one hundred and forty such paintings and art objects depicting this practice. Unfortunately there was much mysticism and superstition in vogue and the practice fell into the hands of many quacks, who performed "uromancy" and traveled from place to place reaping a harvest on their bold prophecies. The barber-surgeons were much in vogue and bleeding, cupping, leeching, poulticing and purging were used extensively with the intent of removing the poisons from the body in a drastic manner. The urine was thought to be an index whereby this toxicity might be recognized and many series of color guides and gradations of sediment-study were evolved and given wide attention. Artists have represented this not only in paintings, but in woodcuts, engravings, etchings and sculpture. The "uromancy" of this period was really more of a divining process than a diagnosis and there was little, if anything, scientific in it. The works of Hippocrates (400 B. C.), however, reveal its use in that period; perhaps in a more scientific manner than obtained some 1900 years later. Eminent authorities have stated that enough attention and credit have not been given to Hippocrates for his observation on the state of the urine, particularly in febrile diseases and the study of urinary sediments in febrile crises. The translations of the genuine work of Hippocrates disclose detailed descriptions of gross urinary studies. He devoted a special book to the study of the urine and

Read before the Pan-American Medical Association Congress, March, 1934.

Fig. 1.—(Uroscopy of) "The love-sick maiden"—Painting by Gerard Dou (1619-1675).

Fig. 2.—"The physician's visit, urine examination and feeling of the pulse"—Painting by Jakob Toorenvliet.

Fig. 3.—"With the physician"—Painting by Gerard Dou (1619-1675) [Uroscopy].





Fig. 4.—"The physician's examination"—Painting by Gabriel Metsu (1615).

recognized stone, colic, hematuria, suppuration and probably tuberculosis and malignant disease. His work was continued by Galen (A. D. 130) and given much attention and study by him and his followers.

The evidence shown in the Egyptian Papyrus (Ebers-1550 B. C.) would indicate a scientific civilization and uroscopy is said to have been practiced in that early period, despite the fact that there is no proof. The following statement of Herodotus reveals the high degree of development of specialism among the Egyptians: "Physick is so studied and practiced with the Egyptians that every disease hath his several physicians who striveth to excel in healing that one disease and not to be expert in curing many. Whereof it cometh that every corner of that country is full of physicians; some for the eyes, others for the head, many for the teeth and not a few for the stomach and inwards."

The ancient Sanskrit works on medicine are said to have elaborated twenty varieties of appearance and character of urine, one of which, the "sweet urine," attracted large black ants, which were later used as a means of diagnosis. The Egyptian superstition in regard to determining virginity by the urine in relation to the germination of peas is amusing. It was believed that the virgin urine would germinate peas, while the non-virgin would not, a rather accommodating test when we consider the germinating power of peas.

Aetius (A. D. 500) is frequently credited with being the first to systematize and classify the differences in the urine and their significance. Alexander of Tralles in the 6th century is said to have discussed urinary sediments quite fully. In the 7th century Paulus Aegineta, a famous physician, wrote extensively on the value of urinary inspection and diagnosis. Although it is generally stated that Contugno first discovered the boiling test for al-



Fig. 5.—"The village physician"—Painting by David Teniers (1610-1694).

bumin in 1770, Theophilus in the 7th century is credited with having found the albuminous change in the urine when it was heated. Actuarius (12th century), uroscopist at the Byzantine court, described the various sediments and defined them according to their color and depth. His graduated glass or matula contained eleven divisions, of which he stated the deposit should occupy the four lowest, the cloud the sixth, seventh and eighth, and the scum the tenth and eleventh. He gave minute descriptions of the differences of appearance of each portion, as well as the morbid significance of them.

Uroscopy was taught in the universities as late as the 16th century and recognized as an honorable occupation, although it had its strong opponents as well as its supporters. Some examinations of the sick depended solely upon the appearance of the urine. Numerous satirical allusions to it appeared in the English, French and German literature and writers of the 18th century have ridiculed the "pispot prophets." The writings of Shakespeare, as well as those of other English authors, reveal numerous references to it.

It is evident, therefore, that it took many hundreds of years, in fact, until the 19th century, before the study of urine became truly scientific—with the discovery and perfection of the microscope, the development of the chemical investigation of urine, and the study of the physiology and anatomy of the genito-urinary organs. In the latter part of the same century we were fortunate in having the contribution of the endoscope and cystoscope and their gradual perfection as indispensable diagnostic aids.

It is unfortunately true that a period of over a thousand years, preceding the modern era, was marked by a great decline in scientific method and achievement; a period in which mystery, mysticism and quackery replaced to a large extent the brilliant work of the ancients who were forgotten.

On repeated occasions we have been impressed with the general lack of the custom of examining the freshly-voided urine in a glass container, before a good light, by any class of professional men ex-

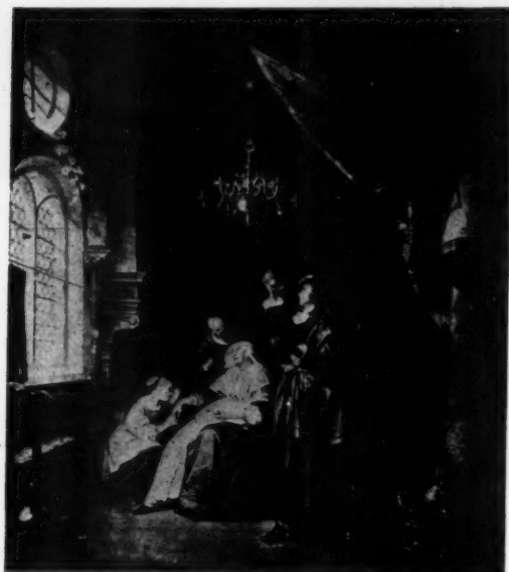


Fig. 6.—"The woman's urine examination"—Painting by Gerard Dou (1619-1675).

cept urologists. It seems to me that we have more or less taken it for granted that many surgeons, internists and practitioners have, to some extent, practiced what we have done for years. This is not the fact.

To remind the urologist of the practical value of the two-glass test, or the visual examination of the freshly-passed urine, in cases of urethritis, prostatitis cystitis, pyelonephritis and other affections of the urinary tract, would be like presuming to teach a half-grown child his A B C's. The value of the clinical impression gained in the diagnosis and progress under treatment of a given case of genital or urinary tract infection is, I believe, conceded.

Despite this, we find today most of those in the profession, outside of our own circle, depending almost entirely upon the chemical and the microscopic findings listed on the printed laboratory report. This method has not infrequently proven to be a source of error, which may particularly apply to large laboratories where routine analysis may be done on a more or less "quantity production" basis, or in those laboratories where technical help is limited for the amount of work done. Some of the so-called commercial laboratories have, on occasion, been the offenders. Furthermore, urine specimens often stand for a long time before analysis is made. After all, the value of any laboratory

report depends not only upon the skill but also upon the self-discipline and thoroughness of the individual analyst. The accuracy of these reports and conclusions made are, therefore, in direct proportion to the quality of work done. It is fortunate, indeed, that, in some localities, new and more rigid laws have been evolved to permit only those qualified to open laboratories for diagnostic purposes.

We recall instances of repeated reports in which twenty or forty or more pus cells per field were listed in the same patient, where our own examinations showed a few leucocytes or none at all. Conversely, some patients with reports of "a few pus cells" have proven, on examination, to have a very cloudy urine filled with pus when freshly voided. Errors of this kind have been frequent. It seems to me that, in principle, it is altogether bad practice for doctors to fall into the custom of depending solely on the laboratory urinalysis, especially if it has not been repeated. The physician would do well, if possible, to make his own urine examinations. When one depends solely on the microscopic report from the laboratory, one usually does not know whether the slide of the urine drop was taken from the mixed quantity of urine, whether it was from the gravity sediment (after stand-



Fig. 7.—"The aged"—Painting by David Teniers (1610-1694).

ing from 1 to 12 hours or longer), or from the centrifuged sediment. In each instance the cell content of a given drop may vary tremendously. There is no better way of estimating the amount



Fig. 8.—"Satirical representation of uroscopy." Note cartoon-like features of uroscopist and dog, can-urinal, etc. Note figure of human seated on pot sketched on urine-flask.

of pus in cases of pyuria than the simple visual inspection of a fresh specimen.

It has been profitable, in our own office practice, to conduct analyses in conjunction with the anamnesis and physical examination of the patient. Early training in the microscopy of urine with Dr. Louis Heitzman has proven of inestimable value.

It is usually unwise to examine specimens of female urine unless obtained by catheter. Unfortunately, there seems to be a general and unwarranted fear of the use of the urethral catheter as causing cystitis. I was recently impressed by the case of an elderly, bedridden female in a well recognized hospital under the care of a general surgeon for fractured hip. She complained of dysuria and some frequency and urgency for two or three weeks. The laboratory reported "a moderate amount of pus." Symptoms increased in severity, and the doctor, on examining the genitals, found a redundant urethral wall which he thought might be a caruncle. When asked to see her, we found that the catheterized bladder urine showed a frankly heavy pyuria in the gross specimen, also a considerable residual urine due to an atonic bladder without urethral obstruction. Apparently it had not occurred to the surgeon to catheterize this patient. Several weeks of irrigation treatment were required to cure the condition.

Instances of a similar nature have occurred all too frequently in postoperative urinary retention, where delay in catheterization and local treatment has prolonged the recovery from bacillary cystitis. I believe there exists, to a large extent, an almost universal tendency in hospital routine to commit this error not only in postoperative, but in medical



Fig. 11.—Two-glass test representing phosphaturia; glass No. 1 on left, cloudy; dropper bottle in center contains 33% acetic acid; glass No. 2 on right after addition of acid with clearing of medium and production of gas bubbles.

cases, in fracture, in orthopedic and in postpartum cases as well. We are pleased to note that Randall and Murray of the Mayo Clinic have recently contributed a valuable paper on the management of the bladder after childbirth. It is an easy matter to overlook a distended bladder, especially if the patient is getting morphine or some other strong sedative.

We have even seen, in private practice, vaginitis and endocervicitis erroneously treated for some time for urinary infection. Voided specimens showed pyuria but no attempt had been previously made to obtain urine per catheter; two of them suffered very severe pain from tubo-ovarian disease and were treated for "acute pyelitis," without examination of the genitalia. This error of omission is obviously bad practice. Furthermore, the habit of depending solely upon the use of internal antiseptics in the treatment of persistent pyuria is to be condemned.

A working knowledge of practical urology or uroscopy must be imparted to and practiced by our confrères, if we are to expect patients to come to us for more accurate and precise diagnosis at an earlier time, when treatment will be most effective, and curative, rather than palliative. Urology, a relatively new specialty, still appears to be one of the less familiar branches to many of those in other fields. The relatively large number of chronic and advanced lesions of the urinary tract, upon which useless laparotomies have been performed without relief of symptoms, indicates the need for complete urological studies being instituted early; in fact, much earlier than they are at present in a great many cases. Uroscopy is the stepping-stone and key-

note-guide to approximate this ideal, provided it is done in conjunction with a carefully and fully taken history of the complaint and a physical examination. On this basis alone the presumptive diagnosis will

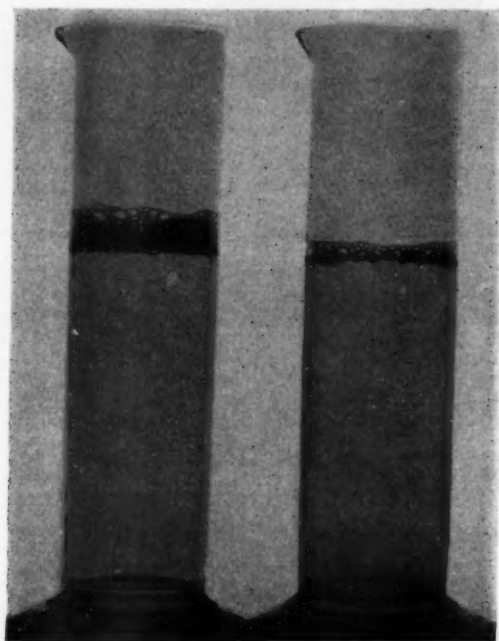


Fig. 9.—Two-glass urine test. Case of anterior urethritis. Urine glass No. 1 on right, moderately cloudy; glass No. 2 on left, clear.

very often prove, on subsequent studies, to be correct. Nor does the burden of this rest altogether on the shoulders of the physician. We must go further and educate the patient as to this need. A striking example of the indifference of the patient is illustrated in the following recent experience:

We have just performed a nephrectomy upon a man thirty-one years of age for calculous pyonephrosis. The stone was the largest that I have ever seen. The right lumbar pain began at the age of eight years and persisted since that time. At eleven years of age an appendectomy for severe colic gave no relief. Uroscopy preceding nephrectomy showed heavy pyuria and foul-smelling urine, which, together with the history of the complaint, indicated a pyonephrosis due either to calculus or anomalous ureteral obstruction. No examination of the urine had been made during the twenty-three-year period of pain. The error in this case was largely due to the indifference and tolerance of the patient. He claims that his father would never accede to his request to consult a physician. Two previous life-insurance examinations for small policies did not include a urinalysis.

We try to impress upon our students, internes and practitioners the proper routine method of sur-

vey in a given case, including the two-glass urine test. The urine glasses we prefer are cylindrical urinometer jars, measuring six inches in height and one and five-eighths inches in diameter. If there is any urethral discharge a smear is always taken first. The freshly-voided urine is examined carefully in a good light and the first glass compared with the second. If the urine is cloudy we teach them to add thirty-three per cent acetic acid to clear it, when due to phosphates. They at once know that the persistence of cloudy urine, after addition of acid, means the presence of pus or blood or both. Every male patient seen in consultation is made to pass his urine, after examination of the meatus, before the physical examination is conducted. Our students and internes have learned to follow the progress and improvement of cases of urethritis, cystitis, pyelonephritis or other urogenital infections under treatment, by the gross inspection of fresh urine, a clinical guide which is invaluable. All female urines are scrutinized immediately after catheterizing the bladder.

It is worthy of note that Clark, in a recent paper on "Ketogenic Diet in Urinary Infections," lists the visual examinations of the urine and the two-

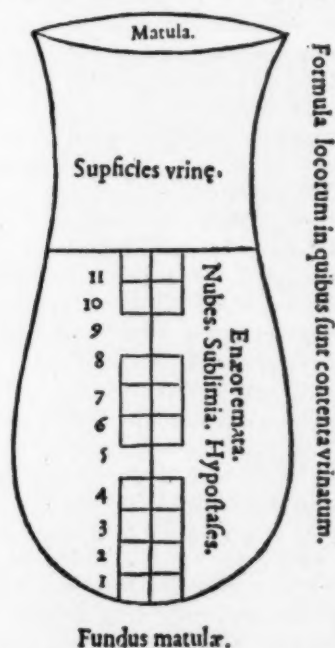


Fig. 10.—Matula of Actuarius (12th century), with markings for study of eleven different gradations of urine sediment.

glass test as the first items in his outline of diagnosis.

We have rarely failed, when the opportunity presented, to show our colleagues the typical opales-

cent appearance of specimens revealing bacilluria. On swirling the urine glass before the light they have learned to recognize the glistening, smokelike turbidity produced by the bacteria. If one is unfam-

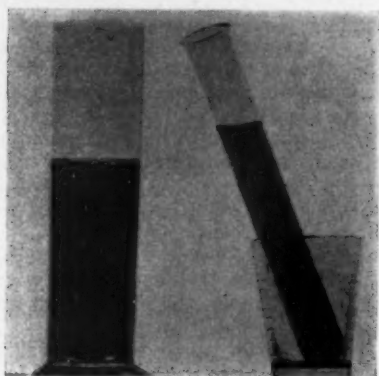


Fig. 12.—Urine glass No. 1 on left contains cloudy urine due to urates after standing for few hours (clear when first voided). Test tube on right represents clear urine after gentle heating over Bunsen flame.

familiar with this characteristic turbidity, he may visualize its strikingly typical appearance by adding a little household ammonia to several parts of water.

Recently a very ill son of a doctor was seen with severe chills and fever and renal tenderness. The freshly-voided specimen showed a quantity of pus and the heavy *B. coli* "swirl." A presumptive diagnosis could be made on this finding alone (subject to confirmation). Supportive and appropriate treatment resulted in a rather rapid recovery without cystoscopy. Subsequent intravenous urography delineated a normal outline of the pelves, ureters and bladder. There were no obstructive symptoms. The original clinical impression (coliuria), gained from the gross urine examination, proved to be correct and the doctor-father was delighted.

One will find, no doubt, on routine inspection of fresh warm specimens, that colon bacilluria (or coliuria) is much more common than was once supposed, that it may be transitory or very lasting, with or without symptoms, without pus or with large amounts of pus, and that an interesting field for treatment of some of these cases will be revealed.

I conceive it to be the duty of the attending urologist, in conference with the heads of the other departments in each hospital, to plan some method or guide for the examination of every patient whereby the freshly-voided urines can be seen in a cylindrical glass container, particularly in all instances where there is even the slightest presumption that there may be anything wrong with the urinary tract. This

requires constant watchfulness and the avoidance of any semblance of procrastination.

Our colleagues should be mindful also of the fact that, in those exceptional cases where there is a complete block of the ureter or pelvis, the urine may be perfectly normal. Obstruction of the ureter or pelvis by calculus, stricture or other lesion may obviously prevent drainage of urine from the kidney, producing a "closed" affection. Among the most common causes of "shut-off," calculus, tuberculosis and aberrant renal vessel may be mentioned. However, the clinical symptoms in such obstructions are quite generally typical of reno-ureteral pathology. If the obstruction is intermittent, naturally the changes in the urine will vary according to the presence or absence of complete obstruction at a given time.

It is also important to recall that a certain number of genito-urinary lesions are "silent" or symptomless. The urine examination may be the only clue to finding the true source of trouble. Unfortunately, in perinephritis and perinephritic abscess, studies of the urine usually serve only to mislead one in the diagnosis because of negative findings. This may explain in part the reason for the frequency of marked delay in diagnosis and operation.



Fig. 13.—Freshly-voided urine photographed immediately after agitation reveals smoke-like turbidity with "swirl" typical of colon bacilluria.

We must remember that, when the urine cools on standing, it may become cloudy from the precipitation of urates (clay water sediment), a cloudiness which clears on heating, or it subsequently be-

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Pick's Disease

With Report of a Case and Some Differential Points

• Alfred Gordon, M.D., Philadelphia, Pa.

PICK'S disease is a form of precocious mental deterioration the diagnosis of which can rarely be made with certainty during the patient's life. From 1892 to 1904 Pick kept on accumulating anatomical data which gradually led him to the formulation of the clinical picture known now under his name (*Wiener Klin. Wchn.* 1905; 18; 1259). During the progressive development of the dementia he observed dysmnnesia, disorientation, disturbance of behavior and activity, defect of esthetic and moral senses, of criticism and affectivity, incoherence, and a gradual transition into exclusively animal existence. In the course of the progress of these disorders, he also observed in some cases aphasic or apraxic phenomena, in others stereotypy, perseveration, taciturnity or mutism, akinesia, disturbance of gait, paretic phenomena, and contractures. Among all these symptoms, aphasic phenomena are the most frequent, especially in the early stage of the affection before the dementia becomes conspicuous; their presence is very important from the diagnostic standpoint. Sometimes they may be so marked that the diagnosis of frontal lobe lesions may be reasonably thought of, and indeed it was actually made in some of the cases reported.

The following case presents a clinical picture almost identical with some of those originally described by Pick and his followers. The differential diagnosis from another affection, namely Alzheimer's disease, in which the pathological findings are in some respects similar to those of Pick's cases, will be emphasized later. In view of the rarity of all such cases, especially in this country, the report of this case finds its justification.

B. B., aged 58, came first under observation about twelve years ago. At that time he presented psychoneurotic manifestations, chiefly of a hypochondriacal character. One year later he had several periods of cyclothymic phenomena: at times he was mildly depressed, at others very talkative and somewhat exalted. He also suffered from persistent insomnia. In 1924 he manifested the condition from which he is suffering at present in an advanced form. It was noticed that he became apathetic and indolent. He began to lose interest in everybody and everything. He was married and had several children to whom he was formerly very much attached. They interested him no more and only occasionally would he inquire about them. When questioned on this subject, he would give a long, delayed answer, in an indifferent manner, as if the conversation concerned strangers. The same attitude was evident toward his wife. The latter soon left him and the children also abandoned him. He showed marked indifference to their attitude toward him. There was no ill feeling whatever on

his part. He apparently began to lose all conception of obligations or of ethical standards. However, when the conversation was pressed and questioning with regard to his family and relatives insisted upon, in the midst of his apathy and indifference, he would brighten up, say quickly that "It is too bad," but then promptly return to his former state. His memory for a very long time remained intact for old and recent events.

About a year ago he began to show peculiarities of gait. He walked at first very slowly; while there was no rigidity in the extremities, nevertheless they presented some resistance to passive movements. At about the same time he developed a paretic state in the right arm and leg, with some impairment of speech. This occurred without loss of consciousness. The entire condition of the patient continued to progress and at present the clinical picture is as follows:

From the somatic standpoint there is the slow gait mentioned above. He walks with small steps, but there is no hemiplegia. The knee-jerks are exaggerated, but the plantar reflex is in flexion on both sides by all methods. The right upper extremity remained, since the hemiparetic attack, somewhat weak, but there is no rigidity. The speech is indistinct and thick. There is no anarthria or sensory aphasia. Further somatic examination is entirely negative. Sensations, pupils, eyegrounds, and cranial nerves are all normal. Basal metabolism, blood cytology and chemistry, Wassermann reaction of the blood and spinal fluid, ears, nose, throat, teeth, genito-urinary apparatus, and the cardiovascular system all present no special deviations from normal. From a mental and emotional angle, the following condition is elicited: The patient is very quarrelsome, shows some paranoid trends, finds fault with everyone; suspects that everybody harbors bad intentions toward him. He is very talkative, repeats the same stories over and over, complains and shows dissatisfaction. At times he exhibits stereotyped movements and he will repeat an act several times. At times he is hyperactive in acts and words; will approach his people many times on the same subject. He eats voraciously but very negligently, allows the food to run out of his mouth, and does not wipe it off. He is getting more and more unclean; urinates and defecates in his clothes and in bed. Washing or bathing has to be insisted upon. He will not change his clothes until somebody else does it for him. His social attitude and particularly his ethical views are blunted. He is totally oblivious and indifferent to the sense of responsibility and to obligations. He never gives any thought to his family and, when reminded, he says that he does not care what becomes of the children or wife. He does not know where they live and never inquires as to their whereabouts. He leads a vegetative life exclusively

* Presented at the October, 1934, meeting of the Philadelphia Neurological Society.

and is not interested in the least in the topics of the day, in community life, or in national affairs. He does not care to read a newspaper. He spends his days in quarreling with others and waits eagerly for something to eat. At times he is seen in a state of hebetude and then again he will awaken and resume his mannerism and the annoying and disturbing attitude toward all. The poverty of emotion and of intellect is gradually becoming more and more pronounced. What is particularly striking is that in the midst of progressing dementia his memory is, to a very great extent, preserved. Up to the last six months he showed a remarkable memory for old and recent events in all their details. Lately, however, there have been strong indications of some failure in recalling facts of a familiar nature. The aphasic disorder is getting more and more pronounced and the gait more and more difficult. He is evidently approaching the terminal stage of deterioration and dementia.

To sum up, we are dealing here with a case of a gradually developing dementia, which commenced at a presenile age, 48, without marked arteriosclerosis, but with total preservation of memory, and with attacks of speech disturbance and of hemiparesis, which have never reached the stage of genuine aphasia and hemiplegia, with their characteristic symptoms. The case also presents an abnormal gait, consisting of small steps, which is ordinarily observed either in senile dementia or in paralysis agitans.

The early onset of dementia, namely, at middle age before fifty, and its gradual but progressive development, also the very pronounced state of deterioration long before the individual reached the age of sixty, and the absence of marked arteriosclerosis remind one of another symptom-group described by Alzheimer in 1907 under the title of "Über eine eigenartige Erkrankung der Hirnrinde," in *Zentralbl. f. Neur. u. Psych.* 18; p. 177. This author also observed an early presenile dementia, but with parallel memory deterioration and a prolonged period of comparatively normal behavior and attitude. In both symptom-groups, Pick's and Alzheimer's, the presenile dementia is the predominant clinical picture, but nevertheless they differ from each other in the several symptoms mentioned above. The few cases that come to autopsy show some difference in the predominance of localization of pathological lesions in the two affections. In Pick's disease the dominant lesion is cerebral atrophy, particularly pronounced in the frontal and temporal lobes, thus explaining the frequent aphasic manifestations in the midst of the progressive dementia. The degenerative changes are seen in the first three cortical layers; also in the neuroglia, which is hypertrophied. In Alzheimer's form of presenile dementia, there is also diffuse cortical atrophy, but the chief lesion is: diffuse senile plaques and fibrillary changes; rarefaction in the cyto-architecture of all layers.

In spite of this difference in the anatomic substratum, it is not always an easy matter to distinguish Pick's from Alzheimer's disease. In the

early stages when there are indications of dementia, insidiously progressing at a presenile age, and no focal neurological symptoms are as yet evident, it is impossible to make a definite diagnosis. Later on in the course of both diseases focal signs are to be expected, if one considers the underlying pathological lesions which in both affections are widely spread. In all such cases a differential diagnosis *ad vitam* is therefore very difficult. The imperceptible and slow onset and progress and the usual long duration of both affections render their diagnosis particularly difficult. However, in spite of the obstacles, one should become suspicious of one or of the other affection, when an individual at middle age, without marked arteriosclerosis, commences to show signs of mental deterioration and then develops speech disturbances, disorder of gait and posture, overactivity in actions and speech, and attacks of mild apoplectiform or epileptiform character. When the disease is in an advanced stage, the above enumerated differential signs concerning the memory, the behavior and the social relationship to the surroundings, the attention, the degree of impressionability, the manner of speaking, etc., will enable one with a certain degree of accuracy to distinguish one from the other affection under discussion.

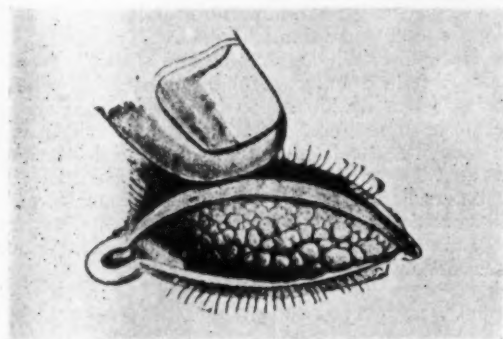
There is one more serious affection with which Pick's and Alzheimer's syndromes may be confounded. That is Lissauer's form of general paralysis of the insane. In this disease circumscribed areas of atrophy may occur and they will explain the occurrence of repeated strokes with or without aphasia, hemianesthesias, astereognosis, etc. The memory defect in the presenile dementias indicating an involvement of the temporal lobe may lead to forgetting names of objects (nominal defect of Head), to perseveration, paraphasia and inability to understand words, all of which may also be observed in parietic dementia. These three affections, therefore, may occasionally be confounded from the clinical standpoint, especially when the early mental and emotional changes are in evidence. Pathologically no such difficulty can be encountered, since in the cases of presenile dementia the circumscribed areas of atrophy are more intense than those of general paralysis.

In conclusion, one may say that although Pick's and Alzheimer's syndromes present somewhat different clinical pictures, nevertheless they are essentially analogous, if not similar, pathological entities, by virtue of the diffuse atrophic changes in the brain. The predominance of involvement of certain cortical areas will give place to one or another of the organic manifestations observed in either of the two affections. Cortical atrophy is the fundamental underlying substratum in both. Since the presenile mental deterioration develops insidiously and progressively, without the presence of arteriosclerotic changes in the brain, a premature selective
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Ocular Manifestations of Allergy

• Rudolph M. Cutino, M.D., F.A.C.S., Brooklyn, N. Y.

THE most important eye conditions attributable to allergy, are the conjunctivitis of hay fever and an ocular entity known as vernal conjunctivitis. A few other eye diseases, as certain types of episcleritis and iritis, have been proven to be due to specific food sensitization, as well as some cases of ulceration of the cornea. The importance



[FIG. 1]

of food in these conditions is just beginning to receive attention (1). The other ocular diseases plausibly attributed to anaphylaxis are phlyctenular conjunctivitis, parenchymatous keratitis and sympathetic ophthalmia (2). Also, some cases of marginal blepharitis and conjunctivitis have been traced to mascara, certain kinds of face powder and cosmetics, and a change of the face powder or cosmetic may clear the condition. As for tuberculosis of the eye, which readily responds to treatment with tuberculin, the conclusion is, after extensive experiments on animals and man, that the rationale in treating tuberculous infections of the eye is the production of perifocal desensitization (3). This is accomplished by starting with a very small dose of tuberculin, such as one millionth of a milligram, and increasing the dose very slowly.

The sensitiveness of the eye to lens protein or even to the capsule of the lens is claimed by many to be the cause of some of the cases of iritis following cataract operation. This subject has received more attention in the past few years and an attempt is being made to test patients routinely for both lens matter and lens capsule prior to cataract extraction, and if a positive reaction is obtained to desensitize the patient before operating on his eye.

The conjunctivitis associated with hay fever manifests itself as a severe catarrhal inflammation of the conjunctiva. The exciting cause being an airborne irritant like pollen, cat-hair, horse-hair, etc., the eyes and nose are the first parts of the body affected, so that the conjunctivitis and nasal symptoms occur at the same time. When the sneezing

gets worse, so does the conjunctivitis, and when the nasal symptoms get better the eyes improve. This type of conjunctivitis recurs every year, usually in the spring, depending on the causative pollen or other exciting cause, and runs an acute course of about two to four weeks.

The patient complains of severe itching of the eyes which is very distressing. It is due to the fact that minute epithelial vesicles are formed in the conjunctiva which can be seen with the slit-lamp or corneal microscope. These vesicles burst their membranes and, as very fine, dry scales, irritate the endings of the fifth nerve, bringing about the severe itching of the eyes (4).

The treatment consists of protection of the eyes from the air and the glare of the sun by dark glasses; the larger the goggles and the closer they fit the face the better. To control the irritation of the eyes we use drops composed of cocaine and adrenalin, as:—

Cocaine hydrochloride—5 grains.

Adrenalin hydrochloride—1/1000-1 drachm.

Normal Saline Sol. q. s. ad-1 ounce.

The above medicine may be used as one or two drops in each eye every 3 hours. The frequent use of the eye cup with cold boric acid also gives great relief.

The other important eye disease, which investigation and study shows to be associated with an



[FIG. 2]

allergic reaction, is vernal conjunctivitis or spring catarrh. It is a chronic disease extending through years, characterized by the fact that in winter the patient is relieved of all symptoms and as soon as the first warm days come in spring the eyes become red and tearful. He also complains of photophobia and the most important of all symptoms, marked itching, which is the cardinal and diagnostic feature in all cases of vernal conjunctivitis (5). This distressing itching of the eyes becomes more
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Read before the Italian Medical Society, May 1, 1934.

Special Article

The Medical Society of the County of Kings A Business Union or a Temple of Healing?

• J. Sturdivant Read, M.D., President, Medical Society of the County of Kings and Academy of Medicine of Brooklyn, Brooklyn, N. Y.

THIS medical society, with its continuous history of over one hundred years, has been and is now the representative body of the medical opinion in this Borough. At present it has a membership of over two thousand; two-thirds of the physicians in the Borough belong, and over ninety per cent of those who have achieved distinction in their immediate communities are its children. These, as well as those doctors who are ineligible, or indifferent, or unable to join our body, look to it to lead the way in spreading knowledge of the growth of our science and of the progress of our art, and they also regard it as the guardian of the great literature of our unique profession. They see it as the moulder of our guild's ethics; ethics being simply a codification of what is fair dealing and good taste. And finally our own members rightly demand that it make every effort to protect our economic rights from exploitation by city, state or lay organizations.

The Society has had its periods when thought was all for scientific progress and community service. It has had its times of financial worry when its major concern was to get bigger halls and better books. There have been other years when by education, protest and persuasion it has led our law makers to protect the profession when it was threatened by legislation which would have been unjust to them as members of a profession created by and responsible to the state.

In these matters, if you read our records, you will find that your representatives have functioned skillfully and in the main successfully. Perhaps their task was easier when the profession constituted more of a majority mind than at present.

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Owing to an economic collapse of all the western world, a mass of our members, in common with the majority of men in other professions, have been brought face to face with actual want or the pressing fear of such a condition. This stimulated an active group in this body to ask, by resolution, that at these great open and formal monthly meetings, all scientific discussion be stopped and that we consider the business side of our profession and nothing else.

By an overwhelming vote we put ourselves on

Inaugural address, delivered January 15, 1935.

record as still desiring more knowledge of our art and affirming that we welcome and value the services of our wise and unselfish confrères who address us. This vote was no mandate to disregard economic matters, and thanks to the freely given time and the skillful work of the chairmen of our great committees, and to the delegates to our city, state and national conferences and to the officers of this body, we are beginning to correct, by organized effort, economic abuses which society has unthinkingly placed upon us. Much of this improvement has been due to informing our representatives of our rights and our needs. After all, the majority of them will give us a hearing because they are individuals peculiarly responsive to our guild because of the good will they bear to some individual physician who has brought comfort in times of personal distress. For our own good we should make it financially possible for these informed, experienced and unselfish members to attend City, State and National investigations of medical matters. Not only our economic welfare but our chances to advance the art of healing and to continuously improve the character of the profession are bound up with the written law.

There are many problems which will come before you for the formal expression of an opinion which will help legislators to find a proper solution, such as group insurance and continuation of free clinics for any except the certified indigent, in which certification organized medicine is to have an effective voice. Can we develop the corporate courage to give a Commissioner of Hospitals an unbiased opinion upon the qualifications of our members who apply for positions in City Hospitals? If the Commissioner of our Health Department attempts to return to the practitioner certain medical work, can we teach the doctor that this work must be done quickly and that accurate records must be promptly given by him to the Department unless society is to again compel the City to practise medicine in certain types of disease.

What shall be our attitude towards certain Foundations? Long before their pronouncements we knew that the cost of complete health service to the poor was too high. Seemingly no one, doctor, druggist, nurse or hospital, was overpaid. Experiments to remedy this state of affairs have not been very successful. Often the efforts of these Foundation philosophers have been irritating. Yet every failure shows the way a thing should not be attempted, so

we can thank them for that. The time has come to cooperate with them because the wise ones have learned that we must be incorporated as willing participators in any plan which will make service to the sick a success. The great public with a sound instinct shrinks from being put under the care of a commandeered medical personnel.

In the solution of these problems, which affects all of society as much as it does the medical guild, we take our part and wield our influence by means of the formal resolutions on these matters which you permit to pass into your records. In this time of tormenting but healthy turmoil slowly there are emerging two main bodies of social philosophy. On the one hand are those who believe that a constantly changing bureau of political experts should formulate laws for each profession and for every business enterprise and, further, that these political experts should direct and enforce the business technique of each person. They wish men to pass from one field of action in which they are professionals, into another position where they are at once amateurs, and as amateurs to direct men experienced in their own business how, when and with whom their affairs shall be conducted.

The sincere group in this body, which thinks that the socialized state is the best solution for our present medical ills, has the hope that by making a man a state official he will become endowed with all qualities of sense and sensibility which reside in the entire body politic. They state that their goal is a certain job at a living wage for every physician. I would remind them that the (political) centurion could say to a man not only "come" but also "go." And that very threat dulls enterprise and, except in the very elect, insidiously lessens the sense of personal responsibility to a sick individual.

Philosophically opposed to the above group are those who believe that within the framework of a democracy, the right of personal contact and of private contract is, with all its acknowledged imperfections, the best means of developing character and of bringing a fuller measure of security and contentment to the majority. It is for you to determine, not only as members of a medical fraternity but as citizens of the Republic, whether you wish to adopt the slogan of "one for all and all for one", the battle cry of the weak and the dreamers, or to hold to our former law of living, the greatest good for the greatest number with governmental and private aid for the unfortunate and for the failures. I ask you to help us pass resolutions in this Society which will express your matured opinion; I care not what it is, so that, by the end of the year, confusion in our general councils may be cleared.

This will call for real sacrifice on your part, namely, to be willing to sit to the end of all executive sessions. We need you men of cool sense to listen to debate, since often oratory, by its charm, confuses only. "For a man may be of scrupulous and impeccable honesty, and yet his respect for the truth may be insufficient. He may be like the lunatic, the lover and the poet. His seething brain apprehends more than cool reason ever comprehends.

He may be by nature incapable of sifting evidence or by predilection simply indisposed to do so." And so I repeat that we have dire need in this body for the constant presence of a group of moderates belonging neither to the short-sighted nor to the visionary—members who by their votes will retard the pace of the impatient and, when necessary, put pins in the seats of the mighty.

Whatever decisions we make, we are acting not only as a County Medical Society but also as an Academy of Medicine in and for a Borough of three millions of people. Shall this Society sponsor a health union where the security of a small fixed income robs youth of its desire for adventure? Shall our guild think only of economics, mostly their own? In them it would be an unnatural folly. Any group thinking of pay before service becomes sterile. This increasing introduction of the barter and trade spirit into the medical mind is one of the reasons for the many damage suits against doctors by patients who through contact with a certain sort have come to think of physicians, not as men primarily at the service of the sick, but as purveyors of a pound of health for a bag of ducats. Or shall this place be still the Temple of Aesculapius?

For a temple is a community more alive to its obligations than to its privileges. In it there must be order and discipline and purpose all dominated by the ideal of cure of the sick. For these lean financial periods when faith is necessary to build character and knowledge is needed to increase skill, nothing is more valuable than books. We own the fifth largest medical library in the country. It is one of our badges of distinction as a County Medical Society. It is the great repository of our traditions, our culture and our means of progress. It is dead or living depending upon its easy accessibility. That is the reason why it must have more space and many more trained servants. This is the compulsion, besides that of affection, which will make us strive for the building of the Frank D. Jennings Memorial.

I hear some asking, what do you propose to do to influence matters for our immediate good. Good and evil are matters of gradual growth. This Society is moving in a goodly way, thanks to the leadership of many past presidents and especially to that of my immediate predecessor, whose hard work, informed mind, devotion to the Society and unique ability to inspire affection in all of us have been of great value in keeping us poised in the midst of trying debates and divergences of opinions. So I shall simply carry on, striving to keep this great Society healthy by continuing to reduce its debt on its landed property and by refusing to extend its activities unless the money is in hand with which to begin them; to make bigger and more available the facilities of our Library; to promote medical education by continuance of our monthly scientific papers and Friday afternoon lectures, by encouraging medical students, hospital internes and our own members to make use of the treasures of our Library that there may be kept alive that thirst for new knowledge and that regard for past culture which make this community a soil rich in poten-

tialities for the continued growth of our Medical School and from which some day may be developed a great post-graduate medical center which will make full use of the unrivaled hospital facilities of this Borough; and to apply the principle of pay for the doctor by aiding any plan which will prevent any but the certified indigent from receiving free medical services; this duty we owe society, for the doctor must have enough security to keep in health and time for post-graduate work so that he may render continuously better service in the most intimate of all tasks. We shall aid in all community efforts to limit disease and to do away with poverty, for in a social sense the terms are almost interchangeable.

Join with me this year and I will start your meetings promptly, limit the time of scientific programs, and hold debate to its proper channel so that you may at least start for home at a seemly hour.

In closing may I say this to you? For the past year I have been mixing with all sorts and conditions of men in this body. Never have I seen a lot more sincere and good tempered in their differences and all held together by the pride they take in this great society, so that whatever group in the coming years may control and remodel it, there is in my heart no fear for its progress, and when I return to the ranks it will be as an enthusiastic worker for its interests and as a believer in the beauty of its destiny.

144 Joralemon St.

Ocular Manifestations of Allergy

(Concluded from page 82)

marked as the weather gets warmer, less annoying on cool rainy days, diminishes in the fall of the year and almost wholly disappears in the winter (6).

The allergic investigations in this disease reveal that a large percentage of cases have a family history of allergic reaction, that most patients have other allergic conditions, and that many cases show positive skin tests, especially if done by the intradermal method. Also, over 50% of the patients reveal an eosinophilia in the blood of over 4% and the presence of eosinophiles in the eye smear (7). These observations show definitely that vernal conjunctivitis is an ocular manifestation of an allergy (8).

It seems that vernal conjunctivitis is an allergy of the eczematous type rather than of the urticarial or the hay fever group, because the pathology of hay fever consists of urticarial swellings which can be entirely removed in a few moments by adrenalin, whereas the pathology of vernal conjunctivitis consists of persistent granulation. In this respect vernal conjunctivitis seems to be more nearly related to eczema, an allergy characterized by persistent inflammation (7).

Vernal conjunctivitis manifests itself in one of two forms or a combination of both. It may involve the conjunctiva of the tarsi (fig. 1) in the form of broad papillae flattened in such a way that the conjunctiva looks like a rough, irregular street pavement covered with a whitish veil as if milk had been poured over it. Or it may involve the limbus (fig. 2) at the medial and lateral sides of the lid

fissure area. The limbic type appears as elevated areas consisting of pale, grayish red, humpy, gelatinous nodes. These nodes push a little into the cornea and end there with a sharp, steep border. The cornea remains clear and the vision is not affected (9).

The treatment, according to experience to date, is only symptomatic, although radium does help a great deal to alleviate the symptoms and produce recession of the granulations but does not cure the disease. The best results are obtained by the "seven times a day" treatment, which consists of bathing the eyes seven times a day with an eye cup with cold boric acid and wearing goggles to shield the eyes from exciting dusts. For the itching we may use a weak solution of acetic acid as eye drops. Many other preparations and drops have been tried but sodium carbonate (monohydrated) solution, 1 to 2%, as eye drops four times a day gives the most relief (7). The local application of lactic acid (10% solution) every two days also seems to be beneficial.

In general, vernal conjunctivitis attacks the male sex predominately in boyhood and young manhood and both eyes are nearly always affected. The disease recurs yearly for 3 to 4 or even 10 to 20 years until it finally disappears. Since it leaves no traces behind, its prognosis with regard to outcome and vision is good, but poor in respect to duration, since we are not in a position, to date, to prevent the yearly recurrence (9).

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165 Clinton Street.

NEWS AND NOTES

The Late Howard Clarke, Distinguished Hawaiian Contributor to the MEDICAL TIMES

Dr. Howard Clarke, 51, prominent Honolulu physician who was decorated by the French government for distinguished services during the war, recently succumbed after an illness of many months.

Dr. Clarke is survived by the widow, Mrs. Eleanor Tracy Clarke, and two sons, Samuel Tracy Clarke, a third year student at the Harvard medical school, and Howard Clarke, Jr., a senior at Dartmouth.

Dr. Clarke closed his offices last July because of his illness. He entered private practice in Honolulu in 1920 after a distinguished career as a surgeon in the United States Army. He was prominently known as an eye, ear, nose and throat specialist.

He was born in New Orleans, La., November 22, 1883. He graduated from Tulane University medical school in

1903 and completed his internship at Charity Hospital at New Orleans in 1905. During his student days at Tulane, Dr. Clarke was fullback on the football team for three years.

Following a trip of several months abroad Dr. Clarke returned to New York, where he practiced until 1910, when he joined the medical corps of the army.

During his army career Dr. Clarke served under General John J. Pershing in the campaign against the Mohammedan tribes of Mindanao in the Philippine Islands. He was later chief of the eye, ear, nose and throat service department hospital at Manila and also served as head of the same department at Tripler General Hospital in Honolulu.

In June, 1917, he was ordered to France as regimental surgeon of the 18th Engineers. Upon his arrival in France he was transferred to the staff of the chief surgeon of the A.E.F., where he remained until the close of the war, being invalided home in January, 1919.

Dr. Clarke served in France as chief of the department for the transportation of the sick and wounded and was one of 40 wounded and was one of 40 American officers to serve in the first battle of the war in which American troops were engaged. He also served in the last battle, the Meuse-Argonne. He held the rank of lieutenant-colonel.

On September 9, 1934, the insignia of a Chevalier de la Legion was conferred upon Dr. Clarke by Captain de Fregate Feraud, commandant of the French naval vessel, Rigault de Genouilly, which was visiting Honolulu at that time. Immediately after the war Dr. Clarke received a diploma of honor from the French government but it was not until September of last year that he received the cross.

The presentation was made at his home with French Consul Irving O. Pecker and Lieut. Doignon of the French ship acting as official witnesses. Intimate friends of Dr. and Mrs. Clarke also attended the ceremony.

While a resident of New York Dr. Clarke was a member of the visiting staff of the New York eye and ear infirmary, serving under Dr. Wilbur M. Marple. He also served on the visiting staff of the Manhattan Eye, Ear, Nose and Throat hospital, under Dr. Lewis A. Coffin. He was a member of the 7th Regiment, N. Y. N. G.

Dr. Clarke was a member of the American Medical Association, a fellow of the American College of Surgeons and a member of the Honolulu County Medical Society.—Abstracted from the *Honolulu Advertiser* of Jan. 7, 1935.

Uroscopy

(Concluded from page 79)

comes cloudy from the natural bacterial fermentation ascribable to urea-splitting organisms.

To digress for a moment, we mention a condition which has become somewhat of a hobby. We refer to acute primary cystitis. Despite general teaching to the contrary, we have found this condition to exist rather frequently and can recall more than a score of cases. The onset is usually sudden and severe, sometimes with frequent spasm and hematuria. Silver nitrate (1-1000 solution) irrigations with instillations have usually proven specific and most of the cases have responded to treatment in a surprisingly short space of time. They have cleared up and remained well. A few have had moderate secondary renal involvement on one or both sides. Many have never required cystoscopy. I recall an ambulance case admitted to the service with severe bladder spasm, blood and strangury, which cleared up completely in one week of daily bladder irrigations with silver nitrate. She remained well on a follow-up regimen directed against colonic stasis and excessive coli growth.

Primary cystitis has been more frequent in females but has occurred in males in a number of instances. I am mystified as to how the severe primary bladder infection gains entrance. It would appear to be through the lymphatic channels of the colon. We are fully aware that bacillary infections are usually renal, but insist that a number are wholly vesical. We have proven this a number of times by catheterizing the ureters during the acute attack, a procedure which is not recommended in the absence of renal symptoms.

Gross examination of the urine is equally useful in the estimation of the relative amounts of blood in any given case of hematuria, whether spontaneous, postoperative or traumatic. The typical milky appearance of chyluria needs scarcely to be mentioned, because of its extreme rarity in this climate.

It is the hope of the writer that this paper will, in some measure, stimulate the urologist to embrace the responsibility of emphasizing the value of uroscopy to all his professional colleagues and students. Furthermore, that urologists will institute a practical working method in their own fields of endeavor, to the end that the profession at large shall adopt systematic uroscopy as a routine measure in the examination of the patient. This will obviously require patience, grim determination and sustained effort if material results are to be obtained in this fertile field.

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306 Park Place.

Add Definitions

Middle age is the period when you have a fifty-year-old brain, a twenty-year-old appetite and a ninety-year-old stomach.—*Newark Advocate*.

Cancer

Department Edited by JOHN M. SWAN, M.D. (Pennsylvania), F.A.C.P.

EXECUTIVE SECRETARY, NEW YORK STATE COMMITTEE OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Assisted by CHARLES WILLIAM HENNINGTON, B.S. (Rochester), M.D. (Hopkins), F.A.C.S., *German Literature Editor*, and UMBERTO CIMILORO, A.B. (Cornell), M.D. (Rome), *Italian Literature Editor*.

Various Blood Serum Reactions Suggested for the Diagnosis of Cancer

IN the attempt to reach a conclusion concerning the nature of tumors immediately after they have been discovered, numerous observers have endeavored to apply the methods of serum diagnosis to the problem. They have studied the serum of cancer patients and of controls from the viewpoint of lysins, antibodies, sedimentation tests, complement fixation tests, anaphylactic reactions, etc.

LYSINS: Edelmann, Schonbauer and Schloss (1) have made experiments with bouillon autolysates from cancer patients and healthy persons. They found that the autolysates obtained from cancer patients had an inconstant lytic property on cancer cells and that the serum from persons free from cancer exerted a lytic action on about 60 per cent of the cancer cells.

Zacherl (2) reported that patients showed an increased carcinolytic serum after irradiation with the quartz lamp. The carcinolytic effect was greater after the injection of spleen extracts than after the irradiation just mentioned by itself. He ascribes the influence of the splenic extracts to the reticuloendothelial system of the spleen.

Wilheim and Stern (3) found the same carcinolytic substance in the sera of normal persons as in that of patients with cancer.

Gardner and Hyde (4) selected a strain of rats susceptible to a transplantable spindle cell sarcoma and gave them a preliminary injection of fresh whole blood from normal chickens. This method resulted in the production of resistance to the "takes" of the tumor in 86 per cent compared to 19 per cent resistance to "takes" in the control animals which had not been subjected to the injection of the chicken whole blood. In the grafts that did succeed in establishing themselves in the treated rats, the observers noted a "marked retardation of growth." Similar treatment of a susceptible strain of rats proved effective against a "medullary carcinoma of high proliferative vigor" in 39 per cent. The control animals in this series all gave positive takes.

Waterman (5) is of the opinion that the substances that produce resistance to tumors are contained in the spleen and in the lymphnodes. So also is Bruda (13).

Kittinger (10) is of the opinion that "the carcinolytic power of the blood serum can be increased by the implantation of the thymus from calves." However, the effects are not lasting. Following implantation of thymus serious disturbances may arise in the patient, the result of decomposition of the protein of the carcinoma cells.

GRUSKIN'S TEST

Gruskin (11) has developed a serum test for cancer. He assumes that in the ordinary course of normal cell growth connective tissue cells produce a lysin that is antagonistic to the excessive growth of epithelial cells and that epithelial cells produce a lysin that is antagonistic to the growth of connective tissue cells. Based on this assumption he produced lysins by inoculating animals with embryonic epithelial cells, on the one hand, and with embryonic connective tissue cells, on the other hand, and demonstrated that amboceptors were present in the sera of the inoculated animals.

The serum of the patient suspected of having a malignant growth is tested against amboceptor and complement, salt solution, amboceptor and salt solution (for the technique see the original paper). If the reaction is positive there will be "a fine white ring at the point of contact of the fluids and turbidity extending downward." There is a description of a simplified modification of the test using the antigen instead of the amboceptor. In this modification a positive reaction is indicated by "flocculation."

In 138 cases of known malignant tumors (carcinomata of various types, epitheliomata, and sarcomata) he obtained a positive reaction in 130, a "faintly positive" reaction in three, a questionable reaction in two and a negative reaction in three.

In twenty-one cases of known benign tumors he obtained a negative reaction in eighteen, a faintly positive reaction in one, and a positive reaction in two.

In 348 cases of nonmalignant disease (not neoplastic) he obtained a negative reaction in 339, a positive reaction in nine. The positive reactions were obtained in two cases of diabetes, one case of leukoplakia of the tongue, four cases of thyroid disease, one case of osteomyelitis, and one case of amebic dysentery. In 146 tests made on normal adults he obtained a negative reaction in 143 cases and a "faintly positive" reaction in three.

Weiner (12) reports a case in which it was necessary to make a diagnosis between cholecystitis, cholelithiasis, peptic ulcer, pancreatitis and carcinoma. He concludes that "in the Gruskin reaction we have a test for the diagnosis of malignancy that merits our attention."

ANTIBODIES: Hirsfeld and Halber (6) found that the sera of pregnant women reacted to cancer antigens. They believe that this reaction is a "growth reaction."

Zinsser (7) says: "No experimental facts have so far justified an assumption of the presence of either specific antigen in tumor extracts, or a specific antibody in the serum of such patients."

Fuchs and Devrient (8) claim to have developed a true antigen-antibody reaction which is practically applicable. They have studied 3,500 cases. They claim great value for the method but in the paper under review no figures as to accuracy have been published.

Lehmann-Facijs (9) has described a method based on the antigen specificity of serum euglobulin which he claims will give a positive reaction in the majority of cases of carcinoma and tuberculosis.

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Economics

Department Editor: THOMAS A. MCGOLDRICK, M.D.

Health Insurance from Within—A Personal Experience

STIGMATIZING the health insurance bill pending before the state legislature as a measure under which patients would get poor medical care, and physicians would degenerate into callous machines, Dr. Jacob L. Moreno of New York City, on January 31, told members of the Legislative Committee, Medical Society of the State of New York, his experience during six years under health insurance in Austria.

"All such schemes," he said, "operate to make physicians into mass-production machines turning out standardized treatment to patients. Every patient is an individual medical problem. Health insurance cheats both the patient and the doctor. In the name of trying to advance human welfare, such measures actually retard progress."

Dr. Moreno is director of research, New York State Training School for Girls, Hudson, New York, and adviser of the Subsistence Homestead Division, Department of the Interior, Washington, D. C.

"I know from experience with the actual reality," said Dr. Moreno, "that no matter how rosy the picture of ideal care for the poor that is presented by such schemes for health insurance, in practice they do not work. They cannot work, because they fail to take account of factors in human relations which are indispensable to the practice of the healing art."

"No physician," added Dr. Moreno, "is capable of properly treating the large number of patients sent him under health insurance. So he is forced to evolve some mass-production plan of operating his office to run people through his mill as fast as possible. A quick look, a stock prescription, a pat on the back, and out the door."

"The 'rush' system of handling patients is inevitable. When the technique of getting them in and out fast enough is perfected, the doctor begins to lose that intangible 'something' which is vital to both himself and his patient,—his morale. I do not know any doctor who remained long at this sort of practice in Austria who did not become hardened. A doctor's personal interest in his patient is essential. The response he makes emotionally to the trust reposed in him is important. If the patient comes to the doctor because of confidence in him and not merely because he is an insurance doctor, interest and insight are quickened. Mutual free choice is basic to good medical care."

"Every person's capacity to expand emotionally, and to sustain a confidential relationship is limited. A physician may be able to maintain a keen mental activity while examining a few cases a day, but after his limit is reached, the power to sustain the faculties on a high plane wanes, until, finally, when the last case of a long line is reached, the patient becomes merely a serial number on a piece of paper. Health insurance forces on the doctor an utterly impossible human task—to sustain a genuine personal interest in all the individuals of a miscellaneous crowd at his door."

"The insurance doctor does the best he can, but patients suspect they would get better attention if they came to him during his private office hours when he could give them more time. This is a distinct and definite injury to the character of the physician. He must hurry through his insurance patients so that he can have plenty of his best self left to take care of his private patients. This is a corrupting influence. He knows he has not lived up to the highest tenets of his profession to give his best to every patient who comes to him. He has been forced by circumstances enacted by a law to do less than his best by some of his patients, and even his best with the few who see him privately gradually becomes not so good as it was once."

"Nobody who has not seen such schemes in practice as I have, can realize how odious they are. They destroy everything that makes the healing art effective. A new face

comes between the doctor and the patient, that of an inspector or supervising physician, or an insurance bureau bookkeeper, questioning this and that particular, without the intimate understanding derived from having seen and known the patient. At best, the real patient, the one for whom the mass-production doctor is working, whom he must please if he is to live, is not the sick man, but an adding machine in the office of a bureaucrat who pays the fees out of an insurance fund. This man doesn't care whether the patient lives or dies, only how much he costs the fund. And his influence is exerted only in the direction of economy and other externals."

"Supervisors are needed in health insurance organizations. A good controller or supervisor who brings in many complaints against doctors is a good supervisor—he is headed for promotion because medical practice has now become a business instead of a profession. Thus do we destroy a truly healing relationship of which trust and confidence is the basis, and substitute a chain-store, cut-rate imitation, which corrodes curative values needed to heal the sick."

"The system which we now have in the United States is not perfect. But I know from personal experience that the conditions imposed by health insurance are far worse. Health insurance is a type of socialized medicine. It is impossible to socialize the doctor unless the business man, the banker, and the lawyer are socialized, too. Until the time comes, if it ever does come, when we have communism or some form of collectivism, health insurance simply will not work. Though it applies only to the lower income groups, those groups will always feel they are getting less than they ought to get, even if the doctors are men of quality having lucrative private practices in addition to their insurance practice. Like all half-way measures, it will fail, despite the well-meaning altruism of those who sponsor such legislation. They do not realize, as the physician does, who has practiced under such a system, how destructive it is to quality in medical care."

"Letters which have come to me recently from former patients in Austria state that conditions are no better now than when I left five years ago, but are worse, if anything."

Recent dispatches from London to our daily papers inform us that the members of the Medical Practitioners Union have become fully paid up affiliated members of the "Trade Union Congress." The number of English doctors so affiliated is over 5,000. When we hear from its champions in England and America how successfully the English Insurance Act operates, how pleased are the doctors connected with it and how they would oppose complete revocation of the law, we are not informed of the medical Practitioners Union. Nor have we been told that this Union would ever find it necessary to become affiliated with the general Trades Union "for purposes of protection and for aid in negotiations." The Secretary of the Medical Union, Dr. A. Welpy, states the purpose of affiliation to be the gain of help in dealing with governmental departments controlling medical positions. To those advocates here of insurance or socialistic health plans who have or seem to have such sublime confidence in the governmental authorities or who have little knowledge or experience with the way our own departments of government deal with doctors, the Medicine-Labor movement must come as a shock. One need not leave one's own State and its political subdivisions, to learn about the financial treatment of doctors working therefor, nor to miss the impotency of any doctor or groups to obtain proper remuneration, to protect salaries from reduction, to remedy the conditions under which the doctor works, or to secure release from lay supervisory control. The treatment of doctors before State Commissioners for the Workmen's
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Neurology

Mechanism of the Neurologic Symptoms in Insulin Hypoglycemia

W. Dameshek and A. Myerson (*Archives of Neurology and Psychiatry*, 33:1-18, January, 1935) note that symptoms referable to the central nervous system are characteristic of the insulin (hypoglycemic) reaction. There is first a sense of weakness and feeling of "uneasiness"; then vertigo, ataxia, mental confusion, incoherence of speech, coarse tremor, and in severe cases, chronic spasms or even convulsions; if the reaction is allowed to continue, coma is the last stage. The authors report a study of insulin reactions in non-diabetic patients at the Boston State Hospital, chiefly by comparing the dextrose and oxygen content of the blood in vessels supplying the brain and the arm before and after the administration of insulin. Samples of blood were taken as nearly simultaneously as possible from the brachial artery, the internal jugular vein and usually a basilic vein. It was found that the uptake of dextrose by the brain, as indicated by the difference in dextrose content in an artery and in the internal jugular vein, was definitely reduced during severe insulin reactions. The uptake of oxygen by the brain, as measured by the arteriovenous differences in oxygen content, was found to vary with the severity of the reaction, and was much reduced in severe reactions. The blood lactic acid was much increased during the reaction in all vessels. Determination of the spinal fluid pressure showed an increase before the objective signs of the hypoglycemia reaction were evident. Determination of the blood pressure showed a slight fall in systolic pressure and a more marked fall in diastolic pressure with resulting increased pulse pressure. The authors note that these findings indicate actual diminution in the oxygen uptake of the brain in the more severe insulin reactions, and suggest that the neurologic symptoms of the insulin reaction may result from a lack of oxygen in the brain tissue.

COMMENT

Slowly, but seemingly surely, as the result of careful research effort by many workers, the ultimate explanation of many physiologic processes is gradually being attained. Myerson and his coworkers deserve commendation for devising the technique of obtaining blood for analysis in their various experiments. In this particular paper their conclusion that the symptoms of a hypoglycemic reaction are due to a defect in oxygen seems quite logical.

It has occurred to the reviewer that a temporary hypoglycemic state might prevail in the various functional nervous conditions, since in the so-called "neuroses" many of the widespread symptoms bear a very close resemblance to the recognized complaints observed in hypoglycemia. For some time in these nervous cases we have been administering glucose rather freely in an attempt to maintain a level. In many instances there has been startling improvement in the nervous manifestations. Previous workers have shown that dextrose is catabolized rather markedly in the brain cells, so this treatment is not entirely empirical.

H. R. M.

Irradiation in Treatment of Tumors of the Pituitary Gland

C. W. Rand and R. G. Taylor (*Archives of Surgery*, 30:103-150, January, 1935) report 23 cases of pituitary tumor treated with high voltage irradiation. These tumors were of different types including 5 cases of chromophile adenoma, 13 cases of chromophobe adenoma, 2 cases of adenocarcinoma and 3 cases of cystic chromophobe adenoma. The authors found that the chromophile adenomas reacted most favorably to the Roentgen-ray treatment; the duration of the relief that may be obtained with this method is variable; in the authors' cases visual improvement was maintained from four months to nine years. The chromophobe adenomas did not respond uniformly to the irradiation; this is partly due to the fact that there were considerable variations in the dosage given. Adenocarcinomas and cystic adenomas showed no favorable response. This series did not include any case of basophilic adenoma of the pituitary but others have reported cases of this type that reacted favorably to irradiation. Theoretically the chromophobe cells, being more embryonic than eosinophilic or basophilic cells, should be more radiosensitive; and tumors with this type of cell predominating should respond more favorably to radiation treatment, but results in this series indicate that this is not the case. In those cases in which the irradiation treatment brought about definite improvement in vision, there was no definite regression in the acromegalic symptoms, but there was no definite advance in these symptoms. The authors conclude that "at best high voltage irradiation will give satisfactory results in only a certain percentage of cases" of pituitary tumors. This form of treatment does not replace surgery, but may be an adjunct of value.

COMMENT

It is important to note that this form of treatment does not replace surgical exploration of the sellar region. The author has properly emphasized the point. This form of secondary therapy is accepted by all students of neurologic disorders. Considerable improvement may be expected in the two types found to respond by the authors.

H. R. M.

The Cerebrospinal Fluid in Psychoses

P. Kopp (*Zeitschrift für die gesamte Neurologie und Psychiatrie*, 151:656-672, Dec. 20, 1934) reports a study of the cerebrospinal fluid in various types of psychoses. In 154 cases of schizophrenia 79 (approximately 50 per cent) showed an entirely normal fluid; 50 of these 79 patients were in an acute stage of the disease. Fifty-five cases showed an increase in the total protein of the cerebrospinal fluid, sometimes associated with an increase in globulin and cholesterol, and abnormal colloidal reaction; 31 of the patients were in an advanced stage of the disease and 24 in an earlier stage. Nineteen of these patients also showed an increase in cell content; all of these were in an acute stage of the disease. In cases in which repeated examinations were made there was a definite parallelism between the changes in the cerebrospinal fluid and the clinical course in 50 per cent. In 104 cases

of cerebral sclerosis, 69 showed a definite increase in the total protein content of the fluid, one an increase in globulin only; the findings were normal in 34 cases. In 81 cases of epilepsy, examined during and between attacks, the total protein varied from 16 to 100 mg. per cent.; an increase in globulin was rarely found, an increase in the cell count more frequently; an abnormal colloidal reaction in a considerable percentage. In 72 cases in which the diagnosis of "psychopathia" was made, the cerebrospinal fluid was entirely normal in 60. Of the 12 cases showing some abnormal findings, 8 could be re-examined, and in all of these some complicating condition was found—traumatic lesion, syphilis, etc., so that the diagnosis of a true "psychopathia" could not be verified.

So-Called Hemorrhagic Encephalitis and Myelitis Secondary to Intravenous Arsphenamines

M. A. Glaser, C. P. Imerman and S. W. Imerman (*American Journal of Medical Sciences*, 189:64-79, January, 1935) report 2 cases of encephalitis and one case of encephalomyelitis following intravenous administration of an arsphenamine. In 2 of these cases, the patients were not syphilitic; the arsphenamine (nearsphenamine) being given for the treatment of severe Vincent's angina. The authors analyze 155 additional cases of encephalitis, encephalomyelitis and myelitis following intravenous arsphenamines from literature, making a total of 158 cases. Of these 146 were encephalitis, 4 encephalomyelitis, and 8 myelitis. The authors' 2 cases of encephalitis recovered without sequelae; in the case of encephalomyelitis the same degrees of paralysis, loss of sensation and loss of sphincter control have persisted for three years. The mortality in the entire series of cases reviewed was about 76 per cent. The analysis of cases showed that encephalitis and myelitis may follow intravenous administration of arsphenamines in non-syphilitic cases; these reactions do not depend on the quantity of the drug given; they occur most frequently after the second dose, but may occur later in the course of treatment. The outstanding symptoms of the encephalitis are convulsions, loss of consciousness, pupillary and ocular muscle changes, abnormal reflexes, loss of sphincter control, mental disturbances, hemiparesis and neck rigidity. In spinal cord involvement (myelitis) there is spastic or flaccid paralysis. In treatment, detoxification (with sodium thiosulphate, calcium thiosulphate, etc.) and measures to reduce intracranial pressure, especially lumbar puncture, are most important. Sedatives and supportive measures should also be used.

COMMENT

This is a complication of ordinary therapy to be feared. It has a very high mortality. The lightning strikes when least expected, and with notable violence. The damage to the central nervous system is apt to be severe.

The immediate therapy advocated should be utilized. It is truly a medical accident and apparently cannot be guarded against.

The above presentation is offered to emphasize an unexpected danger in the too casual treatment of lues.

H. R. M.

Intracranial Operations in the Sitting Position

W. J. Gardner (*Annals of Surgery*, 101:138-145, January, 1935) reports that during the last four years a majority of the major intracranial operations at the Crile Clinic, Cleveland, Ohio, have been done with the patient in the sitting position. The sitting position (combined with avertin anesthesia) has been found advantageous for operations on the cerebellum; it results in diminution of bleeding, lowering of intracranial pressure, lessened tendency to immediate cerebral edema and improved respiratory exchange; and facilitates access to the patient. The sitting position is not recommended for operations on tumors about the sella turcica or on the inferior surfaces of the cerebral hemispheres. In other cerebral tumors, the position may be used to advantage in many cases, but is not recommended for elderly or arteriosclerotic subjects, especially if there is an associated ar-

terial hypotension, as such patients are apt to go into sudden, profound shock in this position. The sitting position is of definite advantage in cervical and upper dorsal laminectomy and in the Adson operation for excision of the cervicodorsal sympathetic ganglia. It has not been found to predispose to postoperative hemorrhage. This position is also used routinely in the Clinic for the diagnostic procedures of encephalography and ventriculography.

COMMENT

The advantages pro and con have been well stated by the authors. In patients suffering from extreme intracranial pressure where an exploration is hazardous at the best, this position should certainly be considered because of the beneficial effects on edema. Any method to improve the immediate mortality of brain surgery is worth while considering.

H. R. M.

Physical Therapy

Ultrashort Radio Waves as a Therapeutic Agent

A. J. Ginsberg (*Medical Record*, 140:651-653, Dec. 19, 1934) notes that in the use of ultrashort radio waves the current does not enter the body by contact as in diathermy; the part of the body interposed in a field of ultrashort radio waves "acts as part of a condenser system." The term ultrashort radio waves, as employed in therapeutics, refers to wave lengths of less than 15 meters. The author employs in his work an oscillator of his own design with a fixed wave length of 13.6 meters. With his apparatus any part of the body may be treated, with the patient standing or sitting. It is not necessary to remove the clothing, casts or other covering from the part to be treated, but metal of any kind must be removed. The author has treated furuncles, carbuncles, cellulitis, superficial and deep abscesses, tonsillitis and Ludwig's angina by this method; the pain was always much relieved, sometimes completely relieved, by the first treatment; other symptoms subsided rapidly, and healing was satisfactory. He has also treated cases of acute and chronic sinusitis with relief of symptoms and healing of the lesion (as shown by the Roentgen rays) in all the acute cases and 75 per cent of the chronic cases. Satisfactory results have also been obtained in the treatment of spasm of smooth muscle, such as spasm of the colon, spasm in cholecystitis and spasm of the gastric cardia or pylorus. The effect of ultrashort radio waves, in the author's opinion, cannot be attributed to heat alone; the effect of the "short wave energy" on bacteria and on the body cells is an important factor.

COMMENT

Ultrashort radio waves, at a fixed wave length, as referred to, have great possibilities as a therapeutic agent, but the technique of application for relief of the several conditions treated should be more accurately stated. The effects of the application of the ultrashort radio waves are not yet entirely understood but the findings reported are interesting and worthy of continued use and observation.

C. R. B.

Super-Diathermy in the Treatment of Dementia Paralytica

J. G. Cullins, H. P. Morgan and W. Seymour (*Medical Bulletin of the Veterans' Administration*, 11:217-222, January, 1935) report the treatment of 205 patients with dementia paralytica by "super-diathermy" at the Veterans' Administration Facility of North Chicago, Illinois. With the technique adopted, three electrodes are used, one on the posterior portion of the thorax, one on the anterior portion of the thorax and one on the abdomen; the posterior electrode is approximately twice the length of the anterior electrodes. The temperature is brought to 104 to 106° F. and maintained at this level for six hours; ten treatments are given. Not more than two such courses of treatment are given in a year. Some of the patients

have had as many as three courses of treatment without ill effects. Treatment was discontinued in 32 patients because of physical complications; 8 patients showed superficial burns, which healed completely following the application of infrared and ultraviolet rays. The majority of patients showed definite mental improvement, gain in weight, and changes in the blood and spinal fluid. Superdiathermy in the authors' opinion does not give as satisfactory results in all cases of dementia paralytica as malarial therapy, but it can be employed with good results in cases in which malarial therapy is definitely contra-indicated.

COMMENT

The term "super-diathermy" referred to in the treatment of dementia paralytica is not entirely clear unless it is intended to mean that hyperpyrexia by diathermy is given by a super-power high frequency machine. However, the treatment given to such a large number of patients and the relief experienced by the majority of them show that it has a therapeutic value in certain types of cases in which malarial therapy is contra-indicated.

C. R. B.

Roentgen Therapy in Chronic Sinusitis

F. E. Butler and I. M. Woolley (*Radiology*, 23:528-535, December, 1934) report the treatment of 700 cases of chronic sinusitis with the Roentgen rays. The cases are classified as follows: 1. Chronic infection with hypertrophic membranes. 2. Cases having polypi or cysts. 3. Cases with atrophic membranes. 4. Cases with densely fibrotic membranes. 5. Postoperative cases, not relieved by surgery. The standard dosage employed was 800 roentgens measured with the Victoreen instrument; a 4 mm. aluminum filter was employed. The best results were obtained when a single full dose was given rather than divided doses; it was also found necessary to treat all infected areas at one time to avoid reinfection from untreated foci. Of the entire series of cases, 450 have been carefully followed up; of these 36 per cent are entirely relieved of symptoms; 55 per cent definitely improved; and only 9 per cent show no or little improvement. The best results were obtained in Group 1 cases, with hypertrophic membranes. The usual reaction to the treatment is stimulation at first with increased discharge; this discharge persists for not more than a week and then gradually subsides. In the authors' cases treated, no ill effects have been observed; a few patients have shown a slight skin erythema at the site of irradiation, but this has subsided "without further difficulty." Seven patients who failed to improve under the Roentgen-ray therapy were subsequently operated; in none of these was the operative procedure rendered more difficult by the previous irradiation.

COMMENT

The large number of cases of chronic sinusitis reported successfully treated by roentgen rays shows rather conclusively that roentgen therapy, assuming proper technique, is beneficial in the several types of chronic sinusitis mentioned.

C. R. B.

Roentgen Rays in the Treatment of Diphtheria Carriers

M. Bychowsky, J. Fraenkel and M. Eisenberg (*Fortschritte auf dem Gebiete der Röntgenstrahlen*, 50:586-588, December, 1934) report the treatment of carriers of the diphtheria bacillus with Roentgen rays in small doses. With throat carriers the head was drawn backward and the rays directed through the skin toward the fossa retromandibularis; both sides of the throat were treated. With nasal carriers both sides of the nose were treated. With children a 4 mm. aluminum filter was used and a 10 to 15 per cent erythema dose given; with adults a 0.5 mm. zinc + 1 mm. aluminum filter was used and a 25 to 30 per cent erythema dose given. Of the 96 persons treated, only one showed a slight febrile reaction with

enlargement of the submaxillary glands. Cultures were made six to seven days after the irradiation treatment; and if three consecutive cultures were negative, no further treatment was given. Healthy carriers were rendered negative by the first treatment in 70 per cent of cases; 24 per cent required two treatments. Some of the children treated had (non-pulmonary) tuberculosis; it was noted that a larger percentage of these children (49 per cent) required more than one treatment to render them negative for the diphtheria organisms. This is probably due to the fact that tuberculosis diminishes the general resistance to all types of infection.

COMMENT

The treatment of diphtheria carriers has always been a difficult problem and the effective results obtained with roentgen rays in small doses are indeed encouraging. The fact that negative cultures are obtained so promptly seems to be the keynote of success in the application of roentgen rays in the treatment of diphtheria carriers. The question arises as to the follow-up on these cases to determine how long the negative cultures remain or the possibility of a recurrence of a positive culture subsequently to treatment.

C. R. B.

Infra-Red and Ultra-Violet Irradiation of Injuries in Sports

W. A. Troup (*British Journal of Physical Medicine*, 9:172, January, 1935) reports that he has treated over 100 cases of sprains (from athletics and sports) with irradiation with infra-red and ultra-violet light. In acute injuries, the infra-red is used for at least three quarters of an hour twice a day; once a day this is followed by ultra-violet irradiation. For the latter the author prefers a titanium alloy arc, because of the penetrative power of the rays. Ultra-violet treatments are given for two to five minutes, depending on the part treated and the skin reaction. In all cases the pain and swelling are reduced by the treatment, and patients are able to move the injured part more freely, which they should be encouraged to do. In injuries of this type, the infra-red rays promote the absorption of exudates and accelerate coagulation, thus preventing further oozing of blood; they also improve the circulation and reduce muscular spasm. The ultra-violet rays "further improve the blood supply and help to maintain it," and also have an analgesic effect. In fractures, healing is hastened by the use of the infra-red and ultra-violet. General ultra-violet irradiation is indicated, as this increases the available calcium "better than any other agent."

COMMENT

The use of infra-red and ultra-violet irradiation in the treatment of sprains is well known to be efficacious. The technique outlined and the preference for a titanium alloy arc for ultra-violet irradiation are worthy of notation. The secret of success seems to lie in the combination of infra-red and ultra-violet irradiation, locally and generally applied to the body.

C. R. B.

Ultra-Violet Rays in Vincent's Stomatitis

A. T. Rasmussen (*Archives of Physical Therapy*, 15:676-679, November, 1934) advocates the use of the ultra-violet rays in the treatment of Vincent's stomatitis. He employs the shorter ultra-violet rays, generated by a suitable quartz applicator, for local treatment; these rays destroy micro-organisms and especially the organisms of Vincent's stomatitis, which are "light sensitive." The only other local treatment used is cleansing of the tissues with hydrogen dioxide and curettage (when indicated). This local application of the rays also improves the circulation and nutrition of the parts. In addition general body irradiation with the ultra-violet rays is employed to increase the general resistance and improve the mineral metabolism. As a rule fractional body irradiation treatments are given every other day at first, then every three days, and later once a week. The dose should never ex-

ceed a first degree erythema dose; when tanning of the skin occurs a change to some other part of the body is indicated. The author notes that these same methods of treatment can be used with equally good effect in Vincent's angina.

COMMENT

The effectiveness of ultra-violet rays in the treatment of Vincent's stomatitis and angina has been known for some time, but because of the tedious application and the proper preparation of the parts it has been discarded by many workers in this field. The author is to be congratulated upon his careful and judicious technique and the fact that fractional body irradiations are given simultaneously during the course of local applications.

C. R. B.

Physical Therapy in Fractures

R. H. Kennedy (*Physiotherapy Review*, 14:185-187, Nov.-Dec., 1934) notes that physical therapy can be an "important adjunct" in the treatment of fractures, if there is close and constant cooperation between the physical therapist and the surgeon. No physical therapy can compensate for late or poor reduction of fractures or ineffective immobilization. Among the physiotherapeutic methods found valuable in the treatment of fractures, the author names heat (especially infra-red radiation), massage, muscle stimulation by various types of faradic current, active motion and hydrotherapy. The author does not favor the use of diathermy in cases of fracture.

COMMENT

The use of physical therapy as an adjunct treatment in fractures has been recognized for a long time and, of course, the best results are obtained by constant cooperation with the surgeon.

The several physical agents employed, exclusive of diathermy, are generally used in the after care of fractures, but the various sinusoidal wave currents have largely replaced the faradic current in muscle stimulation.

C. R. B.

Public Health, Industrial Medicine And Social Hygiene

Epidemiology of the American Form of Typhus Fever

H. Zinsser (*American Journal of Hygiene*, 20:513-532, November, 1934), in a study of 538 cases of the American form of typhus fever (Brill's disease) occurring in the cities of New York and Boston in the past thirty years, found that 94.8 per cent occurred in persons of foreign birth. Over 90 per cent of all cases occurred in a single racial group and, within this group, 95 per cent were foreign born. It was found also that 93.6 per cent of all cases of Brill's disease occurred in persons born in regions in southeastern Europe in which typhus is endemic and often epidemic. Of 126 cases about which definite data are available 75.6 per cent had been in this country for over ten years; in only 2 instances could the infection be traced directly to foreign sources. The author concludes that Brill's disease is an imported form of the classical European typhus fever; the cases observed in New York and Boston represent recrudescences of old infections originally acquired in European foci. In communities heavily louse infested and in crowded areas, such cases may furnish foci for the origin of small or large outbreaks of the disease. Rat reservoirs are not necessary for the endemic continuance of the disease under such conditions, but they may coexist. Brill's disease thus established in the northeastern cities in the United States is regarded by the author as distinct from the form of typhus described by Maxey in the southeastern United States and from the Mexican form (tabardillo), although these forms are caused by closely allied viruses.

Pneumococcus Type Determination in a Public Health Laboratory

E. Becker and P. MacLeod (*Journal of Clinical Investigation*, 103:901-907, November, 1934) report the use of the Neufeld technique for the typing of pneumococci in the Bacteriological Laboratory of the Massachusetts Department of Public Health. This method enabled the laboratory to give physicians an immediate type diagnosis in 94.6 per cent of cases in which sputum contained pneumococci of types I, II, or III; and in 89 per cent of cases of types I and II. This made earlier and more effective serum therapy possible. This method has proved as accurate as more generally used methods, and during the last two months its use has been extended for the determination of other types of pneumococci. Its special advantage is that a type diagnosis can be made within a few minutes. It can also be carried out with small amounts of sputum and does not require the use of mice.

The Sputum in Pulmonary Asbestosis

R. C. Page (*American Journal of the Medical Sciences*, 189:44-55, January, 1935) reports the examination of the sputum of 31 asbestos workers. The average duration of exposure to asbestos dust was fifteen years, with a range of one to fifty years. Tuberculosis was present in 8 cases and in this group the average exposure was 9.2 years. Asbestos bodies (first described by Stuart McDonald in 1927) were found in all but one case, and in this case exposure to asbestos dust had been minimal. In all but 2 cases asbestos bodies were demonstrated at all examinations. As a rule the large beaded or "weathered" bodies, brown in color and iron-reacting, were found in workers who had been exposed to asbestos dust for considerable periods; in cases of shorter exposure, the bodies were smaller in size, lighter in color and less strongly iron-reacting. In 10 cases, clumps or groups of asbestos bodies were found; 5 of these workers had tuberculosis; another was possibly tuberculous, and one had associated cardiac disease. In 6 cases the sputum was examined for elastic tissue, which was demonstrated in 3 of these cases; one of these workers showed tuberculosis. The author concludes that the presence of asbestos bodies in the sputum indicates only exposure to asbestos dust. The number of these bodies found is not significant, but if the old and weathered bodies are found repeatedly, it indicates that a definite pathological process is present. Clumps of these bodies in the sputum are definite evidence of lung disintegration, but the absence of clumps does not indicate that there is no disintegration in process. Elastic tissue in the sputum is also probably indicative of lung destruction.

Recent Progress in the Treatment of Plumbism

Irving Gray (*Journal of the American Medical Association*, 104:200-205, Jan. 19, 1935) reports the use of a "deleading" treatment in both the treatment and the diagnosis of industrial lead poisoning. This treatment consisted of low calcium and high phosphorus diet, combined with the administration of phosphoric acid or ammonium chloride and magnesium sulphate as a cathartic. This treatment was continued for not more than three or four weeks. In six cases in which the patients had been exposed to lead for six months to two years, and a diagnosis of lead poisoning had been made, the deleading treatment in 3 cases showed that they were not heavily "lead," no lead being excreted in the urine at the end of three weeks' treatment. In the other 3 cases the deleading treatment showed them to have absorbed a considerable amount of lead. These patients were repeatedly hospitalized for deleading treatment; during this treatment there was no exacerbation of symptoms or evidence of central nervous system involvement. In 4 cases of subacute lead poisoning due to a relatively short exposure (six months or less) a single deleading treatment was sufficient to obtain excretion of all the lead absorbed and relieve the subjective symptoms that had developed. These individuals were removed from exposure to lead in their occupation. The deleading treatment is of value in diag-

nosis, of suspected cases of lead poisoning; if under this treatment no excess lead is excreted, lead may be excluded as an etiological factor in any symptoms that may have developed. The excess excretion of lead is evidence that lead has been absorbed, but does not necessarily indicate that the symptoms observed are due to this absorption; in these cases the diagnosis of lead poisoning must rest on the clinical evidence and the physician's skill in interpreting it.

The Public Health Officer and the Control of Syphilis

J. E. Moore (*American Journal of Public Health*, 25: 31-42, January, 1935) states that he has come to the following conclusions from fifteen years' experience in clinical syphilology: That syphilis is easily the most prevalent of the major communicable diseases; that directly and indirectly it costs the taxpayer more than any other infectious disease; that there are already available weapons with which it might be at least reduced from a major to a minor problem, if not entirely stamped out, within a generation; that in spite of this we "are progressing not forward, but backward"—for syphilis is increasing rather than decreasing in the United States; that the blame for this situation may be placed in part on the public health officer. The author maintains that the greater part of public money spent on syphilis is spent not to help minimize the problem of syphilis, i.e., on the adequate treatment of early cases or for the prevention of late progression or relapse by the treatment of latent cases, but rather on the patient whose "late lesions, often crippling," have already developed. That part of the blame for this situation rests on public health officers, he considers is due to the fact that in most communities, they have helped to maintain "the conspiracy of silence" in regard to syphilis and its importance as a public health problem. In public health work, relatively much less stress is laid on syphilis than on "the 10 times less prevalent diphtheria, or even on the nearly extinct dodo typhoid fever." The public health officer, however, should lead in a campaign of education both among physicians and the laity as to the dangers of syphilis and the cost of syphilis to the community, the necessity for early diagnosis and adequate treatment, and should seek to obtain support for adequate facilities for the treatment of early infectious and latent cases. From the point of view of money costs, adequate expenditures for such purposes will reduce the ultimate cost of syphilis to the community.

Ophthalmology

The Occurrence of Ciliary Processes on the Iris

A. B. Reese (*American Journal of Ophthalmology*, 18: 6-9, January, 1935) notes that it is not at all uncommon to find in the adult eye that one or all of the ciliary processes arise from the posterior surface of the iris instead of from the ciliary body. The frequency of this anomaly is appreciated only when the entire globe is cut completely in serial sections. In 8 otherwise normal human eyes sectioned in this way, ciliary processes were found to arise from the iris in 6 cases. In such cases the ciliary process is covered with a double layer of pigment epithelium around its base. The processes on the iris may have no connection with the processes on the ciliary body, but as a rule a bridge exists between the iris processes and the contiguous process of the ciliary body. Under this "bridge" there is often a space that may have the appearance of a cyst in the iris stroma in an individual section. This anomaly of the ciliary processes may have a clinical significance, the author suggests. The processes arising from the iris may interrupt the dilator-muscle layer of the iris and cause a congenital irregularity of the pupil. In operations on the periphery of the iris, excision of these processes may incite an "undue reaction;" and especially in cases where all the ciliary processes on the iris may possibly be an exciting cause of sympathetic inflammation.

Action of Epinephrine on the Normal Human Eye

S. C. Howell (*Archives of Ophthalmology*, 12:833-841,

December, 1934) in experiments on normal persons found that the instillation of a 2 per cent solution of epinephrine into the conjunctival sac usually caused a reduction in the intra-ocular tension; in most cases the drop in pressure did not occur until more than an hour after the instillation. A lowering of tension in lesser degree may also occur in the opposite eye. Epinephrine also produces a mydriasis, which usually occurs within an hour and disappears within twenty-four hours. Following dilatation of the pupil with epinephrine, there is no tendency to a sustained or material increase in the intra-ocular tension in the normal eye. The author concludes that because epinephrine does not produce an increase in intra-ocular tension it may safely be used as a mydriatic for examination of the fundus and media of the eyes in cases in which atropine or its derivatives might be dangerous. He notes, however, that in susceptible persons, the absorption of epinephrine from the ocular conjunctiva may cause a systemic reaction; this occurred in one of his 100 cases, but the reaction was slight and of short duration.

COMMENT

The effect of epinephrine on the abnormal and especially on the glaucomatous eye is not always happy. The vascular constriction which shrinks the entire contents of the globe cannot be other than helpful, for it sometimes lowers the tension remarkably and for quite long periods. The passive congestion which is apt to follow long continued and too frequent use is not so desirable, while the wide mydriasis which is harmless in the normal eye has often been disastrous in the glaucomatous one with its shallow anterior chamber and easily blocked filtration angle. When the pupils are kept well contracted, however, epinephrine will often be the decisive factor in the success or failure of miotic treatment.

E. M. A.

Nutritional Xerophthalmia

J. A. Thorson (*Journal of the American Medical Association*, 103:1438-1440, Nov. 10, 1934) notes that xerophthalmia rarely develops in adults even with considerable vitamin A deficiency. Since the discovery of vitamin A and its relation to this form of eye disease, 4 cases of xerophthalmia in adults have been reported in the United States. The author reports the fifth case, which occurred in a farmer, whose "very occupation was the raising of food which is the chief source of vitamin A." For six years he had had swelling of the eyelids, pain in the eyeballs, photophobia and yellowish discharge in the fall and winter. He had at one time been treated in the hospital for "kerato-iritis," and under local treatment for the eye condition and the regular hospital diet recovered in a month. In the sixth winter he came under the author's care because of rapidly failing vision. The most striking finding in the right eye was the dryness of the cornea, which was opaque and lusterless; in the left eye, the most striking feature was the "beefy" appearance of the bulbar conjunctiva; the cornea was also insensitive. Local treatment of the eye with atropine and instillation of mercurial ointment was supplemented by dietary treatment—butter, cream and a malt syrup containing vitamin A were added to the regular hospital dietary. The acute symptoms were relieved, but there was considerable permanent loss of vision. A study of the patient's history showed that in the fall and winter months he had included neither butter, milk, cream, eggs, nor fresh vegetables in his diet; in spring and summer he had eaten eggs and a few green vegetables, which had caused the subsidence of the acute symptoms each year and aided in the preservation of vision. Exposure to abundant sunlight in the summer season was probably an additional seasonal therapeutic factor.

The Pathology of Senile Cataract

D. B. Kirby (*New York State Journal of Medicine*, 34:1000-1008, Dec. 1, 1934) notes that in senile cataract, ophthalmoscopic examination to determine the degree of the opacity and study with the slit-lamp microscope to determine the type and the stage of the cataract are important, as the decision as to the technique to be em-

played in each case rests on these findings. The author classifies senile cataract primarily as nuclear and cortical cataract. Nuclear cataracts represent a pathological sclerosis of the nucleus of the lens, in which the hardening of the lens proceeds more rapidly and less uniformly than normal. The recognition of the degree of hardening of such a cataract by slit-lamp microscopy is important, as in advanced degrees of hardening where there is no longer any hygroscopic cortex, the capsulotomy operation is indicated, and there is no need for intracapsular extraction. In cortical cataract, the beginning of the process is characterized by development of subcapsular vacuoles or globules, separation of the lamellae, splitting of the sutures and cortical haze. The author notes that none of these changes can be demonstrated in micropathological sections, as they are altered in the process of fixing and hardening the specimens. The opacity progresses by extension of these processes and by denaturation and coagulation of the lens protein until in the mature cataract the hygroscopic lens protein is entirely destroyed and excess water is extracted from the lens; and abnormal organic and inorganic compounds enter the lens through the capsule. In the hypermature cataract, the excess water and soluble lens protein are removed through the capsule, leaving in the capsule degenerated epithelial cells, insoluble cortex protein mixed with abnormal organic and inorganic materials, and the hard nucleus.

COMMENT

Microscopic studies like these during life, made possible by the slit lamp, reveal opacities long before they can be seen with the ophthalmoscope and enable us to decide more intelligently the most suitable time and method of operation. Sooner or later they will show us why some cataracts remain stationary while others progress; whether the various methods of retardation for which so much has been claimed are of any actual use; and finally they will enable us to speculate more intelligently on the causes of cataract.

E. M. A.

The Use in Thyroxin in Ophthalmology

P. C. Jameson (*Archives of Ophthalmology*, 12:635-643, November, 1934) notes that Dr. William Browning of Brooklyn, N. Y., instilled thyroxin into his own eye because of progressive opacity of the lens, and also exacerbations of tension. Within a short period very definite improvement in vision for near work (reading) was noted, although there was only a slight improvement in distance vision. Increased tension was moderately reduced by the thyroxin. The author has used instillations of thyroxin in 25 cases of incipient cataract; in none of these was definite regression of the cataract noted, but the majority showed some improvement in vision, though often only slight. Because of the well-known "erratic" visual changes in incipient cataract, the author is of the opinion that it is "too soon to pass judgment on the amelioration of changes in the lens." In Dr. Browning's case, however, the failure in vision had been steadily progressive before thyroxin was used. Four cases of keratitis, kerato-iritis, and iritis are reported in which instillations of thyroxin brought about rapid improvement. In 6 cases of vitreous opacities, marked improvement was observed in all following the use of thyroxin; in 2 of these practically complete recovery was obtained. In a few cases with increased intra-ocular tension, thyroxin reduced the tension, and some patients noted a slight improvement in vision; the question of reduction of tension by thyroxin, the author believes, must be further studied. For instillation in the eye, small doses of thyroxin are used, from 1 mg. to 1 c.c. increasing to 5 mg. per 1 c.c. The author is of the opinion that the dosage can be increased to 10 mg. per 2 c.c. without danger of toxic effects. The action of thyroxin on the eye is to be considered as that of a local metabolic stimulant and alterative.

Carotid Sympathectomy in Lesions of The Optic Nerve and Retina

A. Magitot (*Annales d'oculistique*, 171:897-934, November, 1934) states that in performing the operation of carotid sympathectomy for lesions of the optic nerve and

retina, the common carotid is stripped of its sheath for one or two centimeters and the operation is extended to remove the sheath of the internal carotid for approximately two centimeters. The author reports 6 cases in which this operation was done, 3 cases of optic nerve atrophy, one case of retinal arteritis, one case of retinitis pigmentosa and one case of toxic amblyopia. One case of optic nerve atrophy was of the familial type, the 2 other cases of a tabetic type. In all the cases operated there was a definite improvement in vision; and in the case of toxic amblyopia a complete restoration of vision. The effect of the sympathectomy is to improve the local circulation, and the resulting improvement in the nutrition of the optic nerve prevents further degeneration, and improves the function of the nerve fibers that are not completely atrophied. In syphilitic optic nerve atrophy, the results in this small series of cases have been especially encouraging.

COMMENT

The dilatation of blood vessels which follows sympathectomy has been the basis of experimental surgery in several conditions which depend primarily on vascular spasms, as in the extremities and even in cardiac angina. In ophthalmology it has suggested another method of curing or retarding various degenerative conditions by flooding the badly nourished structures with fresh blood. The reported results have been conflicting and not too encouraging, although the cases have been far too few to justify definite conclusions. Naturally, they have been much better in the more or less acute conditions like the toxic amblyopias and most discouraging in chronic conditions like retinitis pigmentosa and the optic atrophies. Probably the deciding factor will prove to be the amount of vitality remaining in the cells at the time of operation, and especially pertinent is whether the vascular dilatation is permanent, or whether it gradually disappears. Certainly the report of Magitot should arouse renewed interest in a group of cases which has for generations seemed almost hopeless.

E. M. A.

Economics

(Concluded from page 38)

Compensation, and the quantity, quality and kinds of treatment permitted by lay supervisors under the F.E.R.A. and the P.W.A. are present illustrations. Doctor Welpy adds "that there is no question of our ever being called out on a general strike." That statement is neither necessary to nor questionable by any one who knows the medical profession. An old Scotch Golf 'Pro' answered his novice that "the best way to get out of the rough is not to get into it." In these days of such intense activity on the part of the professional social workers and Foundation subordinates in the enactment here of laws drawn by themselves for Health Insurance it is well for the medical profession to be studiously careful that neither patients nor practitioners are drawn into the "deep rough."

Cancer

(Concluded from page 37)

- (7) Hans Zinsler. Resistance to Infectious Diseases. Ed. 4:212.
- (8) Hans J. Fuchs and W. K. Devrient. Wien. klin. Wchnschr., January 27, 1933. 46:108.
- (9) H. Lehmann-Facius. Klin. Wchnschr., March 4, 1933. 12:333.
- (10) A. Kittinger. Wien. klin. Wchnschr., October 31, 1929. 42:1434.
- (11) B. Gruskin. Amer. Jour. Med. Sci., April, 1929. 177:476.
- (12) Joseph G. Weiner. Ann. Int. Med., June, 1933. 6:1644.
- (13) E. Bruda. Münch. med. Wchnschr., October 4, 1929. 76:1671.

Pick's Disease

(Concluded from page 31)

involution of the neurones is in all probability the chief cause. It suggests an abiotrophic anomaly perhaps of a hereditary and degenerative character. 1812 Spruce Street.

Editorials

The Physician's Hated Individualism

In these years of mass thinking, mass emotion, collectivistic set-ups, and universal depreciation of the significance of the individual life, the physician, as one of the last and best examples of individualism, finds himself backed against a wall by hostile rabbles. As an individual, insisting upon the importance, even sacredness, of his own and other individual personalities, and dealing, for the most part, with individuals on intimate planes, he is fast becoming, seemingly, a kind of isolated anachronism.

It is true that he has his large-scale problems, as in the field of public health, but in his essential and historic character he is highly individualistic in his own personality and in his technic.

Along with the clergyman, he is serving as a last and, let us hope, saving bulwark against collectivism in all things human; for the individual is still the chief concern of religion (surely the primary aim of religion is to build character, on the principle that "it is impossible to have a regenerated society that is not based on regenerated individuals"), along with large considerations analogous to the doctor's public health obligations. Here is a real bond between superficially unwelded forces.

It is the physician's individualism that arouses the most vexation in those prophets of a wholly collectivistic day (what a nightmare!) who would regiment him and all his kind.

It will not be well for the world if he yields one jot or tittle. In the nature of things, it is not in reason that he can yield. This is not recalcitrancy; it is the supersanity, independence, devotion and sacrifice that have produced every worthy torch-bearer of medicine from a Hippocrates to a Crile.

Unscrambling An Embarrassing Situation

The Milbank Memorial Fund vehemently denies that it has been officially advocating State Medicine.

Yet the medical profession could not have failed to acquire such an impression in view of the fact that a responsible official of the Fund, much in the public eye, always identified with the Fund, and quite naturally supposed to be an unsilenced spokesman, has long been praising vociferously the glories of State Medicine. How could "misunderstandings" have failed to arise in such circumstances? The Fund's embarrassment upon learning, at long last, that medical men were reacting unfavorably to the situation set up by the aforesaid highly articulate official and its repudiation of the notion that anything like propaganda has ever been authorized or quietly condoned by the Fund at any time seem a bit naive, but we have no right to question its sincerity.

It will be conceded that considerable incongruity would inhere if a fanatical Buddhist missionary were to function as the Secretary of the

Federal Council of the Churches of Christ in America.

We believe, however, that the Fund's sincerity will be made more manifest by the time of its next meeting, which takes place some time this month. There is obviously but one way through which the Fund can regain whatever degree of confidence the medical profession reposed in it before its town crier bellowed his opinions and judgments in the market places of the world. That way concerns the official whose aggressive espousal of State Medicine has been the source of the Fund's embarrassment, finally arousing it to an alarmed consciousness of the realities.

It is most unfortunate that there should appear to be an irreconcilable conflict between the Milbank Memorial Fund, which is "the spiritual and financial embodiment of a wise, generous, and charming woman, Elizabeth Milbank Anderson," and organized medicine. Uncompromising acrimony at all points of possible agreement is just a bit absurd; we are not Neanderthal men, facing prehistoric monsters. Right now, the Fund is forming a medical committee of perhaps one hundred physicians, chosen as truly representative of medical opinion on the subjects with which the Fund deals. This committee will be associated with the Advisory Council and will, presumably, include members of the profession who have made a study of medical economics. It will collaborate with the staff in such studies as may be appropriate after the results of the conferences now pending in Washington under the auspices of the President's Committee on Economic Security have become known—studies that will be made available to all groups interested in the subject of health but *not to be used by those associated with the Fund to influence the opinion of the general public.*

The matter of health insurance forms only a part of the Fund's studies. Upon other points there should be closer cooperation, notably with respect to such a plan as that of the Second District Branch of the Medical Society of the State of New York, which the Fund might wisely sponsor and finance. That plan (as well as the proposals of the State Society Committee on Economics) contemplates the modernizing and perfecting of present State statutes which regulate the provision for medical care of the indigent through agencies of public assistance, and also the establishment of a system of credit agencies through which solvent persons of limited resources can meet their expense for medical care, to be repaid out of their income over a reasonable period. The Second District Branch's plan further contemplates a program to educate the people as to the importance of seeking medical care from qualified physicians instead of resorting to quackery and patent medicines.

Let us continue to foster our basic aims unflinchingly, while joining forces wherever common interests touch. Let us, in short, be civilized. There

is all the more need for such preservation of our cultural integrity in a world of seeming chaos. Emotionally based animosities lead only to destructive warfare, comparable to the idiocy of embattled nations, and in this case it is the sick, to whose interest we are primarily committed, who suffer most.

Rosenthal Test for Syphilis

In 1929, Rosenthal (*Proc. Soc. Exper. Biol. and Med.* 27:61, 1929) described a microflocculation method for the diagnosis of syphilis. He found that the test was sensitive on weakly positive and doubtful Wassermann serums. Tulipan and Director (*Arch. Dermat. & Syph.* 25:451, 1932) found that the Wassermann and Rosenthal tests agreed in 986 instances and disagreed in 81. They found no disagreements in patients not clinically syphilitic.

Scott (*Jour. Lab. and Clin. Med.*, Sept., 1934) uses the Rosenthal method as a check on the Wassermann. It is especially valuable for emergency uses, such as testing donors for transfusions, and to rule out negative serums before testing by more complicated tests. Scott gives a simplified method for performing the test. Finger blood is used and only .05 cc. is required. Twelve tests can be set up at a time and they are examined microscopically under low power within five to eight minutes, never over ten. A negative reaction appears as a granular suspension, evenly distributed; slight clumping is noted as doubtful; well defined clumps as positive and large clumps in a clear field as strongly positive.

Scott concludes that the Rosenthal test is an accurate, simple and economical method, agreeing well with the Wassermann and Kahn tests. He recommends it as a check or as a preliminary test, to be checked later by other methods. Twelve tests may be set up and read within ten minutes. The antigen may be kept on hand ready for use. It may also be found useful in the routine suggested by Tulipan and Director, that of testing first by some simple method to rule out the frank negatives, then testing positive and doubtful serums by other methods to confirm or disprove the preliminary findings.

M.W.T.

Air Conditioning

Medicine is indebted to the engineering profession for many contributions to sanitary science and not the least of these is the new art of air conditioning, which has brought to our homes, our offices, our railroads and our places of assembly a new defense against atmospheres polluted with soot, dust, bacteria, pollens and odors.

Air conditioning, when applied to enclosures for human occupancy, has been defined by Dr. Leslie N. Gay, of Johns Hopkins Hospital, as the adjustment of temperature and humidity to produce comfort and health. In summer the temperature and the relative humidity must be lowered; in the winter the temperature and the relative humidity must be increased. In both cases the motion of the air must be controlled (*Journal of the Amer-*

ican Medical Association, May 6, 1933, Vol. 100, p. 1382).

In so far as we advantageously control the atmospheric factor we will, other things being wholesome, lessen the incidence of the respiratory infections and the ill health dependent upon polluted air.

It is hardly to be doubted that such control of the atmosphere in our professional meeting halls would also conduce to the quality of our executive and technical functions, and also to the attendance of the brethren—particularly those especially sensitive to the vile conditions now prevailing.

Improving Birth Control Strategy

The dissemination of birth control information to all married women is now advocated by spokesmen for the American Birth Control League on the ground that it would enable prospective parents to add to their families when health and economic conditions are favorable. It is possible for those desiring to become parents to have as many children as they wish, provided that the fundamental principles of maternal and infant welfare are maintained. The principles governing social planning for economic security must be applied to family planning if the security and integrity of the family are to be maintained. So say the new voices.

This is an interesting shift in the position of the propagandists, and one indicative of growing enlightenment, as well as of shrewd tactical technic. Their hitherto crude approach to the problem of population seems to be in process of rationalization. A new age demands new codes and new adjustments. That is what a board of strategy is for. Ultimate alignment with hostile camps is conceivable. There must be better brains in the high councils of the organization and we congratulate the outfit on their accession, present control, and apparent sincerity. It is possible that they have represented a civilized minority not hitherto free to state their objectives and intentions clearly and authoritatively. Perhaps they have never aimed at family effacement. One of them affirms a belief "in as many children in a family as is compatible with health and income." Perhaps the best proof that the propagandists' new strategy is effecting results is the fact that in their recent defeat at Washington on the Birth Control Bill the vote was 15 to 8. Eight committeemen represent a gain for the propagandists.

Coming—The Household Aquarium Test for Ovulation

In the *Journal of the American Medical Association* for December 29, 1934, Kanter, Bauer and Klawans, of Chicago, describe a test for hormones in pregnancy urine which utilizes the fact that the female of the fish known as the Japanese bitterling possesses an externally visible oviduct. Only certain bitterlings, however, respond to the active principle, so that a process of selection is essential. Such a standardized fish will show a lengthening of its ovipositor, persistent for about twenty days, when four cc. of pregnancy urine is put into a quart of

water containing the fish. About 80 per cent of positives are positive at the end of the first twenty-four hours. The oviduct will lengthen, when the response is positive, from its normal 2 mm. to 15 or 25 mm. The test seems to have about the same clinical value as the Friedman and the Aschheim-Zondek, but possesses many obvious advantages over the latter.

The authors make a number of research suggestions, among them determinations of estrogenic substance at periods of physiologic variation, such as occur at various stages in the menstrual cycle. This may well lead to exact means of fixing fertile and sterile periods in given cases, taking the place of or supplementing and checking calendar calculations after the Ogino-Knaus fashion.

In view of the progress now being made in this field, we may hope yet to see a household aquarium which will enable any woman to identify her fertile and sterile periods with a fair degree of biologic accuracy.

Crude and harmful contraception of the prevailing type seems doomed. We should like nothing better than to see all the wretched junk so employed on the way to a permanent scrapheap. This is not a mere matter of wishful thinking on our part, for the bitterling test is obviously a sure portent of the near future, even if the test itself will not figure directly in the new methods of hormone detection. Science, not fantasy and prejudice, is determining these things.

The Welfare Island Project

New York City needs more parks and sport facilities but the needs of the sick, especially the chronically ill, are obviously greater and more imperative. Welfare Island is the logical place for the development of a great modern system to meet the problem adequately. There is no lack of other near-by island areas suitable for parks and sport facilities, for example, Ward's Island and Randall's Island; indeed, advantage is now actually being taken of the latter's availability and the Triborough Bridge is expected to serve this area by July 1, 1936. We hope that federal funds will be allotted to meet the great cost of the Welfare Island project, since at least \$25,000,000 will be required. The relief of the hospital system and the removal of health menaces from normal city residents would be great boons.

Winged Victory

Medicine still has its romantic and pioneering side. Dr. Vance B. Murray is a United States Public Health Service man who has been "lent" to the Bureau of Indian Affairs and he has tackled the Alaskan frontier with a plane, partly with a view to proving its economy when used for such a purpose. Dr. Murray is to direct the medical welfare of 30,000 natives in isolated areas and he expects to visit every human habitation once a year and the larger settlements two or three times, utilizing skis and wheels as well as his plane. Dr. Murray will have some hospital facilities at government

expense and the cooperation of the medical men in the district. Thus is the skill of the physician given a wider range and the least of God's children accorded the benefit of modern science.

This is old stuff in Australia, where the plane was long ago made the key to a far-flung medical system of amazing efficiency. We are delighted to see aviation medicine looking up in this country and are convinced that there is need for it everywhere, even in the State of New York. New York City might well make a beginning with the new type of autogyro for institutional inspection and administration, thus saving time and personnel.

Lottery Logic

Under the social security plan, a store clerk begins at twenty, say, to pay into a fund which guarantees him a pension of forty dollars at the age of sixty-five; yet actuaries tell us that the average young man of twenty can only expect to live just a little less than a year beyond sixty-five. This is certainly a compulsory lottery, with chances sold to the lowly. The man who is compelled to participate in such a system hopes, of course, that he will be one of the very few lucky ones to live many years beyond sixty-five.

Voluntary lotteries for hospitals, however, are somehow immoral.

Pains

(Columbus Dispatch)

Ailments, like fashions in clothing and hairdress, have their seasons of popularity. During the early fall and early spring every sniffle accompanied by a headache is called a case of "flu," whether or not it has been so diagnosed by a physician. And in recent years so much rumor and speculation about the symptoms of appendicitis have gotten around that almost any severe pain in the abdomen is believed by the victim to be the signal for a hurried trip to the hospital and an operation.

It is well, of course, to heed the warning of pains, wherever they may be. They are certain signs that something is wrong. But the evil of lay diagnosis and home remedy cannot be emphasized too much. The significance of a pain is better known to a doctor than to the person suffering from it.

One level-headed physician attending a doctors' convention in Texas has read a paper in which he remarked upon the fact that almost everyone with a stomach-ache believed he had appendicitis. However, a pain in that region does not necessarily mean that the appendix is to blame. In one instance quoted by the physician here referred to the pain was caused by a spider bite. Removal of the patient's appendix would have done no good.

The doctor is the proper person to see when in doubt about a pain, or even if there is no doubt. He can trace its cause far more accurately than can the average individual who knows nothing of medicine and surgery, except what he has learned from old wives' tales and a patent medicine almanac.

Ligue Internationale Contre Le Rheumatisme

Methodic Campaign Against Rheumatism

The Ligue Internationale contre le Rhumatisme will hold its 5th International Congress at Lund (Sweden) in September, 1936. Prof. Dr. S. Ingvar, Professor of Internal Medicine in the University at Lund has been elected Chairman; Prof. Dr. G. Kahlmeter, Stockholm, Secretary.

Further information to be had from the secretary of the Ligue Internationale contre le Rhumatisme, Dr. J. van Breemen, Keizersgracht 489/491, Amsterdam.

Correspondence

A Protest

To the Editor of the MEDICAL TIMES:

Perhaps one is justified in stating that an ability to collate a mixture composed of very little truth and much larger proportions of conjecture, theory and hearsay, into a whole which has the appearance of indubitable fact is an essential qualification for a successful career in journalism.

And perhaps it is because the editor of the MEDICAL TIMES does not fully appreciate the facility with which a good newspaperman can use words to "lend an air of verisimilitude to an otherwise dull and unconvincing narrative" that he reprinted, under the title "Light From Brains," an editorial from the New York Times.

Therein the writer describes Dr. George W. Crile as "incorrigibly imaginative," and declares that Crile has just perpetrated "another piece of alchemy."

George Washington Crile has led a busy life, all in the interest of medical science. His scientific qualifications and attainments are recognized by scientific men the world over, and it is certainly presumptuous for any person to dub him an alchemist.

But it is more than presumptuous—slanderous, I should say—for a person whose own statements convict him of having no more than a cursory, superficial acquaintance with the problems to which men like Gurwitsch and Crile have devoted their lives, to deny the authenticity of their experiments or scoff at their conclusions.

This journalist writes about biologists who "have seen a grain of sand in chloroform behave as if it were an ameba." Evidently the accomplished journalist has read or heard about the use of a grain of sand and a drop of chloroform being used to demonstrate the manner in which the ameba rejects indigestible material, and in the approved and conventional journalistic manner distorts this scientific fact into his bizarre statement that a grain of sand can be made to act like an amebic organism.

This journalist states that some ten years ago Alexander Gurwitsch discovered "strange mitogenetic rays which are given off by onion roots, blood, yeast and living cells in general." Then he goes on to say that these same rays are produced by certain chemical reactions between inorganic substances. And then, with a superb exhibition of journalistic logic, he kicks Gurwitsch, *et al*, into the limbo of alchemy by writing that "what seems to be an attribute peculiar to life belong to all matter. Evidently 'mitogenetic' should be suppressed. It means that only when mitosis occurs—cell activity, in plain English—are rays given off. Since the rays have no unique connection with cells, the term is only a hindrance to clear thinking."

Imagine a journalist having an intimate, first-hand acquaintance with "clear thinking." Perhaps it is only those who are "incorrigibly imaginative" who can. As a matter of fact, the journalist, true to his training, has placed his pliohippus abast the vehicle, or, in "plain English," "hitched the cart before the horse."

Mitosis does not mean "cell activity." It signifies "cell division." And "mitogenetic" does not imply something that is produced by the cell, but *per contra*, something concerned with the genesis of cells.

Gurwitsch's development of his theory of karyokinesis is epochal, but not because it postulates that rays are given off by cells, because he doesn't claim or infer any such thing. Its extreme value as a contribution to biochemical knowledge is that it demonstrates that cells do not divide—and by division multiply—because of a force endogenous in themselves, but because of the stimulation conferred by mitogenetic rays emanating from matter exogenous to the cell itself. As this theory is well proven by competent physico-chemic experiment it seems "unique" to say that mitogenetic rays have no connection with cells, and that the term is only a hindrance to clear thinking.

The journalist goes on to say that Crile, Gurwitsch, *et al*, had "better deal with the perplexities of such comparatively simple things as iron and oxygen than advance

strange hypotheses about life, when we do not even know the exact chemical composition of protoplasm."

Perhaps it may interest the journalist to learn that protoplasm has no "exact chemical composition;" that it is merely a component of cell life as opposed, for instance, to the nucleus; that its composition is as variable as that of the whole cell; that under the microscope it but rarely appears as a homogenous substance, and that in life it is constantly undergoing chemical changes that definitely preclude any exact determination of its chemical composition.

I wonder if it is impertinent to suggest that the editors of both the Medical and Non-Medical Times owe Dr. Crile an apology.

St. Louis, Mo. A. M. ALLEN, M.D.

Lung Abscess

HAROLD BRUNN, San Francisco (*Journal A. M. A.*, Dec. 29, 1934), limits his discussion on abscess of the lung to that type which had its beginning, at least, as an acute putrid abscess—foul smelling, containing elastic tissue, usually aspiratory in origin and containing a multiplicity of bacteria, both anaerobic and aerobic; excluding bronchiectasis, abscesses on a carcinoma basis and those produced by foreign bodies. For the purpose of this study 205 cases have been reviewed, hospitalized between the years of 1925 and 1934. In the study of the literature, the dominant opinion expressed is that lung abscess should be treated medically or expectantly over a considerable period of time. Under the term of medical treatment the author includes inhalations, postural drainage, bronchoscopy, artificial pneumothorax, phrenicectomy, arsphenamine and the application of roentgen therapy. Surgical treatment includes only open drainage or lobectomy. The use of x-rays for diagnosis is most important. Physical examination is, at best, equivocal. The use of iodized oil seldom gives any information in lung abscess, as the cavity is almost never filled by the opaque medium, just as the cavity does not empty easily by postural drainage. It is of advantage when the abscess has broken into the pleura or is complicated by a bronchiectasis. Its disadvantages are great in that it remains within the lung for months at a time and it is most difficult to read future roentgenograms. Many mistakes have been made in the reading of x-ray plates when it was not known that iodized oil had previously been employed. In his study of the bacteriology of lung abscess the author confirmed the studies of D. T. Smith that four types of anaerobic organisms (spirochetes, vibrios, fusiforms and cocci), acting in symbiosis, are responsible for the inception of this disease, but after careful bacteriologic study of bronchoscopic specimens he was unable to use the knowledge gained for either treatment or prognosis. He points out that in the question of mortality there is bound up with it the long hospitalization period, the economic and the social problem of months or years of disability, in many cases preventable. Certain basic principles underlie the healing of lung abscess, treated either medically or surgically. These are perfect drainage of the infecting material as in other surgical abscesses, aeration of its interior and the ability of the cavity wall to collapse. The advantages of surgery in meeting these requirements is evident. Perfect drainage of the abscess cavity can be obtained, leaving no undrained pockets from which extension can take place. Through-and-through aeration of the cavity and bronchi results. The importance of the through-and-through passage of air cannot be overestimated. By a liberal removal of the roof of the cavity, its early collapse is facilitated. The choice of time and procedure in the surgical treatment of lung abscess will always require rare judgment. Important requisites in surgical treatment are careful localization, the performance of the operation in two or even more stages instead of one, the use of the cautery or diathermy knife in exposing the abscess and the use of compression by a gauze pack or paraffin. Charts and tables are presented that give the results of the study of 205 cases. They graphically depict the weakness of present-day methods in the treatment of lung abscess showing definitely that both the medical man and the surgeon should take a more positive action in the treatment of lung abscess.

MEDICAL BOOK NEWS

Edited by TASKER HOWARD, M.D.,

All books for review and communications concerning Book News should be addressed to the Editor of this department
1313 Bedford Avenue, Brooklyn, New York

March, 1935

CLASSICAL PARAGRAPHS



Leopold Auenbrugger
1722-1809

I here present the reader with a new sign which I have discovered for detecting diseases of the chest. This consists in the percussion of the human thorax, whereby, according to the character of the particular sounds thence elicited, an opinion is formed of the internal state of that cavity. In making public my discoveries respecting this matter I have been actuated neither by an itch for writing, nor a fondness for speculation, but by the desire of submitting to my brethren the fruits of seven years' observation and reflexion. . . . What I have written I have proved again and again, by the testimony of my own senses, and amid laborious and tedious exertions; still guarding, on all occasions, against the seductive influence of self-love.

Leopold Auenbrugger: *Inventum Novum ex Percussione Thoracis Humani*, Vienna, 1761. John Forbes' Translation. Reprinted in C. N. B. Camac's *Epoch-making Contributions to Medicine, Surgery and the Allied Sciences*. W. B. Saunders Co. Philadelphia, 1909.

REVIEWS

Diagnosis by Machinery

DEFINITE DIAGNOSIS IN GENERAL PRACTICE. By W. L. Kitchens, M.D. Philadelphia, W. B. Saunders Co., 1934. 8vo. 1,000 pages. Cloth, \$10.00.

We are offered a mechanical method of making a diagnosis in Dr. Kitchens' new work. All you do is to list the findings in a given case history according to the directions in the book, which will then tell you to turn to page so-and-so and there is your diagnosis. The book is divided into two parts. The first part lists all the diseases in which each one of 506 symptoms, or signs occur, one page to each symptom or sign. Since the symptoms and the diseases are all numbered, it is a relatively simple matter to run through the symptoms you have noted and find out which disease, designated by a convenient number, consistently turns up in the consideration of each. You then turn to this disease (number) in the second part of the book, and there you are. You are supposed to check over the symptoms and signs enumerated under the disease heading in this part of the book, and see if they are reasonably consistent. Sometimes two or three diseases are strongly suggested and a consideration of the catalogued characteristics of each is said to either make the distinction or suggest further observations to be made on the patient. John H. Musser of Tulane says in a foreword that to use the book requires a thorough preliminary clinical study of the patient, and that this stimulating influence is valuable; that the practitioner can, in a minimal amount of time, eliminate most of the morbid conditions which may simulate the disease of the patient, and have quite definite information as to the real cause of the illness; and that he will be stimulated to wider reading by its use. It is probably true that the book mechanizes more or less satisfactorily part of the mental process which the diagnostician ordinarily works out in his mind, and does it better than the beginner and undoubtedly more quickly, but very much less accurately and judiciously than does an experienced clinician. Furthermore, a beginner who depends upon a me-

chanical substitute for thought, in our opinion is likely to lack the capacity for that essential instrument to the end of his days.

TASKER HOWARD.

A Stereoscopic Approach

OBSTETRIC MEDICINE. The Diagnosis and Management of the Commoner Diseases in Relation to Pregnancy. Edited by Fred L. Adair, M.D., and Edward J. Stieglitz, M.D. Philadelphia, Lea & Febiger, 1934. 743 pages, illustrated. 8vo. Cloth, \$8.00.

The object of this book is briefly to coordinate and correlate the medical knowledge concerning the problems of diagnosis, therapy and prognosis of disease occurring coincidentally with pregnancy. This knowledge is of common interest to all who practice medicine whether they are internists, obstetricians or general practitioners. The parturient is subject to a large number of medical complications. The strict specialists, internists or obstetricians often disagree in the management of these cases. The editors have attempted in this volume to approach medical problems coincident with pregnancy from the dual points of view of the internist and obstetrician with the hope of reaching some common ground for the better management of these cases. Diseases of respiratory tract, heart, blood, dyscrasias, etc., are not uncommonly met with by the obstetrician. The internist with a knowledge of the physiology of pregnancy is best qualified to properly care for these patients. The authors realized their handicaps and in this volume have given the profession points of view of the obstetrician and the internist concerning medical problems affecting the pregnant mother. To the profession in general this book may be recommended as a stimulant and guide post for further studies to correlate the various specialties of medicine. To the general practitioner, obstetrician and internist, it may be recommended as part of their armamentarium for the better management of the expectant mother.

VINCENT P. MAZZOLA.

Valuable Work On Bone Infection

OSTEOMYELITIS, ITS PATHOGENESIS, SYMPTOMATOLOGY AND TREATMENT. By Abraham O. Wilensky, M.D. New York, Macmillan Co., 1934. 8vo. 454 pages, illustrated. Cloth, \$9.00.

This work is the most thorough, scientific and complete presentation of a surgical lesion which, from the viewpoint of both patient and surgeon, is one of the very serious trials of surgical practice.

Each one of the thirteen chapters deals with a single phase of the subject in a clear, concise and most readable manner. The chapter on the historical development of osteomyelitis is delightful and reads as easily as fiction despite its deeply scientific import. The treatment by the author of the subjects of pathogenesis is very fine and the explanations of the mechanism of infection, bacteriemia, secondary foci, etc., are clear and most understandable. The chapters concerned with treatment leave no doubt in one's mind as to the indications for both operative and nonoperative forms of treatment and the author very forcibly and clearly shows that the designation Chronic Osteomyelitis has no place in present day terminology in regard to this disease. He has fairly, and without bias, tried to evaluate all the best known methods of treatment in the light of his wide experience with this disease.

His descriptions of the manifestations of osteomyelitis in the various parts of the skeleton are marvels of clarity and he has searched the literature to exhaustion to completely cover as fine a bibliography on his subject as one could wish. The illustrations are profuse, clear and well placed in reference to the text. There seems to be no question that this book should be an invaluable aid to every practitioner, teacher and student of surgery.

H. WRIGHT BENOIT.

Applied Anatomy

THE ANATOMY OF SURGICAL APPROACHES. By L. C. Kellogg, M.D. Baltimore, William Wood & Company, 1934. 134 pages, illustrated. 12mo. Cloth, \$1.50.

This small volume of one hundred and thirty-four pages is planned as a guide to the surgeon, carrying out the more common surgical procedures as well as laboratory directions for laboratory workers and medical students.

The volume is divided into three parts and a total of eleven chapters. There are a few graphic illustrations to clearly demonstrate the more difficult approaches.

The various chapters demonstrate how vessels, nerves, bones and tendons may be approached for treatment with the least possible damage to overlying structures.

This small volume is concise and covers a lot of ground for its size, and should prove a handy and ready reference for the surgeon.

RALPH F. HARLOW.

Histology

A TEXTBOOK OF HISTOLOGY. By Harvey E. Jordan, Ph.D. [6th Ed. Rev.] New York, D. Appleton-Century Company, Inc. [c. 1934]. 738 pages, illustrated. 8vo. Cloth, \$7.50.

Since its first publication in 1916 this textbook has been accepted as one of the most useful. Although the subject is relatively staple, the edition shows much revision with additions of new material and expansions of old, requiring some elimination of previous material. Many new figures have been added and all are of the same excellent standard as have been previously noted. It is a standard text that still remains interesting and stimulating despite its comprehensiveness.

IRVING M. DERBY.

More About Contraception

BIRTH CONTROL, ITS USE AND MISUSE. By Dorothy Dunbar Bromley. 8vo. 304 pages. New York, Harper & Bros., 1934. Cloth, \$2.50.

Said by Dickinson to be "the first book to cover the whole subject of birth control," this volume does cover the waterfront and remarkably well too. An excellent book, well informed, entertainingly written and thoroughly readable from first page to last. Following the modern psychological convention Havelock Ellis is mentioned in passing. Freud's pessimistic philosophy has of course influenced the author. But then who is not aware of the deadly inhibition?

The safe period of Knaus and Ogino now being "propagandized" as she truly says, is discussed, fairly but not calmly. It is true that we have not had sufficient time to consider fully this method of control of conception, yet the future at least holds promise. That "it would still seem unfortunate that the physical union of a man and wife should be regulated by the calendar" may be only a matter of opinion. Is one more fortunate if one is able to pay five dollars a year for spare parts and what not at Mrs. Sanger's service stations? (Rate quoted in this book).

Doctors should read this book. It will do them a lot of good. They should know, however, that the author has the poorest opinion of many of us who are as ignorant of contraception as are our patients. In the West and South there are doctors "who have never heard of, handled, or seen a sheath" (condom). . . . On the whole a worth while book written with the help of many whose names, usually with academic title and hospital position, appear throughout the volume. The chapter entitled "When pregnancy is dangerous" is the weakest, and apt to do the most harm. Harold Hays, for instance, is quoted thus: "It is the opinion of the majority of otologists that patients having a tendency toward deafness should be extremely careful about becoming pregnant." He has "found it necessary where such deafened patients have become pregnant, to insist upon an abortion being performed."

CHARLES A. GORDON.

New Edition of Anspach

GYNECOLOGY. By Brooke M. Anspach, M.D. Fifth Edition. 8vo. 832 pages, illustrated. Philadelphia, J. B. Lippincott Co. [c. 1934]. Cloth, \$9.00.

The 5th edition of this well known text-book has been completely rewritten. All the recent advances in gynecology have been evaluated and included. The subject matter is well arranged and profusely illustrated.

The author has thoroughly searched the literature for this material as evidenced by the comprehensive bibliography appended to each chapter. Particularly illuminating are the chapters on endocrine disturbances, endometriosis and radiation therapy. Several chapters are devoted to diseases and operations not coming strictly within the domain of gynecology but nevertheless frequently encountered by the gynecologist.

This work is very comprehensive and is an excellent addition to the library of the general practitioner as well as the specialist.

LEO S. SCHWARTZ.

Urology In Brief

SYNOPSIS OF GENITOURINARY DISEASES. By Austin I. Dodson, M.D. St. Louis, C. V. Mosby, 1934. 275 pages, illustrated. 12mo. Cloth, \$3.00.

This book is a short treatise of genitourinary diseases especially written for the student of medicine who may readily grasp the essentials of this specialty and it is also a useful manual for the general practitioner. The indications for cystoscopic and other methods of diagnosis and treatment are named and defined but the details and technic must be obtained from the larger text books.

The first four chapters describe the most prominent signs and symptoms of urogenital diseases, diagnosis and treatment of minor conditions, description of the anatomy of the genitourinary organs and anomalies of these organs. The remaining chapters are arranged largely according to the etiology of the disease.

The book is illustrated with photographs and pen and ink drawings which aid in making the text matter better understood. It is a reference book which should be in the library of every practitioner.

PHILIP GOLDFADER.

Biochemistry of Organic and Inorganic Substances

A MANUAL OF BIOCHEMISTRY. By J. F. McClendon. New York, John Wiley & Sons, 1934. 381 pages, illustrated. 8vo. Cloth, \$5.00.

The author has made a rather unusual arrangement of the material for this subject. An extremely large introduction contains a discussion of such widely varied subjects as physical chemistry, colloid chemistry, meta-

bolism and endocrinology. Part 2 is devoted to inorganic chemistry and the author briefly discusses inorganic constituents of blood and tissues, their rôle in metabolism, also the rare elements used in experimental physiology and pharmacology. The next chapter contains the material found in any elementary textbook of organic chemistry.

Part 4 which is a physiological summary, contains reviews of the rôle of biochemistry in physiology.

Next follows a chapter on laboratory methods and finally a table of 1000 substances of biochemical interest with a description of their physical and physiological properties. This table is valuable for ready reference. It appears to the reviewer that the author attempted to incorporate too much material in this 400 page book—a task although aimed at completeness, has left discussions of important topics entirely too brief.

WILLIAM S. COLLENS.

A Good Dissecting Manual

HUMAN ANATOMY, DOUBLE DISSECTION METHOD. By Dudley J. Morton. First and Second Dissections. New York, Columbia Univ. Press, 1934. 4to. 265 pages, illustrated. Cloth, \$6.00.

This work is another excellent effort to enable the student to visualize the component parts of the body. The author has endeavored to ameliorate the fact that dissection results in the destruction of relations by having the student reconstruct with the aid of the textbook the very relations he has destroyed. This is done by applying the correct names to the anatomical parts involved in the diagrammatic drawings with which the work is so richly embellished. The minute directions for tracing nerves, vessels, and lymphatics, as well as the methods of identification of these structures and the muscles, is impressive to the student while the abundant interspacing enables him to mark down immediately and in sequence his impressions. The plan is good, the scope wide, the purpose definite. It is a most valuable work.

THEODORE L. VOSSELER.

For the Training School

A TEXTBOOK OF PATHOLOGY FOR NURSES. By Coleman B. Rabin, M.D. Philadelphia, W. B. Saunders Co., 1934. 12mo. 243 pages, illustrated. Cloth, \$1.75.

This little volume of Pathology for Nurses can well be recommended as a text book for the students in training. It serves its purpose well and the subject matter is handled in a very useful and novel way. The usual questions are placed at the end of each chapter.

Every lecturer in pathology to nurses should find this volume of great help. The style is clear and lucid and the explanations are not involved.

It is unfortunate that certain errors should have crept into the excellent illustrations, as, for example, on page 71, what is obviously the parietal peritoneum is legended parietal pleura; and on page 74, in the illustrations, figure 14, an "f" has been printed instead of a "t" in "tuberculosis." These errors are not of any particular importance and do not detract in any way from the general excellence of this volume. Its use for its adoption as a text book in training schools for nurses should prove of distinct value to both student and teacher.

MAX LEDERER.

The Physician in History

THE DOCTOR IN HISTORY. By Howard W. Haggard. New Haven, Yale University Press, 1934. 408 pages, illustrated. 8vo. Cloth, \$3.75.

Dr. Haggard has abandoned his alliterative trick in title making ("Devils, Drugs and Doctors," "Mystery, Magic and Medicine") with this book which was written for his children. It is an interesting and well written outline of the development of medicine, from speculations about its prehistoric state down to speculations about its future. The story is simply told, and should be readily understood by intelligent children, but it would be a pity if its reading were confined to children. It contains the sort of information that understood by enough laymen, would constitute a background against which the superstitions and misconceptions of the cultists would appear

in their true light and be treated accordingly. It does not seem like a child's book. It would appear less like one if the sources of the many old prints with which it is illustrated were revealed.

Trends in medicine are traced, from superstition to philosophy, from philosophy to science, and periods and tendencies are illustrated with occasional brilliant thumb nail biographies.

Much is made in the book of the social responsibilities of the doctor, by which is meant the vital relationship of civilization itself to the principles of sanitation, which it is the doctor's duty to teach and apply. Beside this social responsibility the author by no means overlooks the more personal aspect of medical practice. Thus in his concluding paragraph he states that "the doctor of today, for all his successes in the fields of social leadership, for all his conquests in the laboratory, still wrestles with diseases at the bedside of the individual patient just as did Hippocrates and Sydenham and all those generations of men who devoted their lives to ease the suffering of their fellow men."

TASKER HOWARD.

Osteology In Miniature

AIDS TO OSTEOLOGY. By Philip Turner, F.R.C.S. Third Edition. 16mo. 222 pages. Baltimore, William Wood & Co., 1934. Cloth, \$1.50.

This small pocket volume of 222 pages, including the index, is the third edition and contains a very brief study on the entire subject of osteology.

It undoubtedly fills the need of a student or graduate who finds it necessary to review the subject for examination or quiz, and its conciseness makes it of some use as a desk compend on the subject of osteology.

There are no illustrations but muscle origins and insertions are discussed along with the subject of osteology.

HERRBERT T. WIKLE.

Tuberculous Adenitis

TUBERCULOSIS OF THE LYMPHATIC SYSTEM. By Richard H. Miller, M.D. New York, The Macmillan Company, 1934. 248 pages, illustrated. 8vo. Cloth, \$4.00.

"Tuberculosis of the Lymphatic System" is a small volume devoted, as the title implies, entirely to tuberculosis of the lymphatic system and hence is possibly of more interest to the surgeon than to the internist, though there is much in it that should be of value to all practitioners of medicine.

The work starts with a most interesting introduction devoted to the historical aspect of the infection "Tuberculosis." The chapters run on then to describe the biology, modes of entrance and spread, pathogenesis and anatomy of the lymphatic system. There then follows a very valuable and detailed description of cervical lymph node disease and its treatment paying particular attention to the technique of the surgery involved. Tuberculosis of the tracheo-bronchial lymph nodes, abdominal lymph nodes, axillary, inguinal, atypical and generalized lymph nodes are then described.

All in all this is a very valuable contribution to the study of a branch of medicine and surgery to which comparatively little attention has been paid in the past. The volume is very well put together and the articles exceedingly well illustrated.

FOSTER MURRAY.

Reappearance of An Old Friend

PHYSICAL DIAGNOSIS. By Richard C. Cabot. Eleventh Edition. Baltimore, William Wood & Company, 1934. 540 pages, illustrated. 8vo. Cloth, \$5.00.

A book that has passed through eleven editions since 1905, that has been so widely used by students and practitioners of medicine since the publication of the first edition needs no introduction to the profession.

The eleventh edition has been thoroughly revised. New chapters have been added, particularly one on the electrocardiogram. This is concise, well illustrated with cuts demonstrating the important cardiac arrhythmias.

The sections on subacute infectious endocarditis and coronary heart disease, although rewritten are to our mind too briefly described, particularly the latter which

on account of its increasing importance could have been discussed in greater detail.

The section on tuberculosis has been enlarged and the importance of X-Ray in the early diagnosis of the disease has been stressed. We were particularly gratified to note that in discussing haemoptysis there was included a footnote warning of the grave danger of increasing hemorrhage by percussion and forced respiration and cough within 48 hours of the accident.

This book is full of such valuable suggestions and it is this that makes it of such unusual value to the student and practitioner of medicine.

ARTHUR E. LAMB.

A Famous Poem

THE SINISTER SHEPHERD. A translation of Girolamo Fracastoro's *Syphilidis Sive de Moreo Gallico Libri tres* by William Van Wyck. Los Angeles, Cal., The Primavera Press, 1934. 85 pages, illustrated. 8vo. Cloth, \$4.50.

This is a translation of one of the several poems written in Latin by Fracastoro, the man who gave syphilis (The Sinister Shepherd) its name. For any one who is interested in the cultural aspects of medical history this volume possesses a particular interest. It is interesting too as an exposition of the early sixteenth century conception of one of the great plagues of the human race. While much of it is antiquated and of course ridiculous according to modern knowledge, there is evidence of a great deal of very keen clinical observation. There are several very interesting copies of old pictures which are in keeping with the text and add materially to the attractiveness of the book. It is well worth reading.

N. P. RATHBUN.

Sex Instruction

SEX-HYGIENE. What to Teach and How to Teach It. By Alfred Worcester, M.D. Springfield, Ill., Charles C. Thomas, [c. 1934]. 134 pages. 8vo. Cloth, \$2.50.

The author presents his lectures and experiences in the teaching of sex hygiene since 1899.

Although the work consists of one hundred and thirty-four pages yet it includes most of the phases of sex hygiene that can be discussed before various groups, large or small. This volume is not "just another one of those sex books" but on the other hand the information contained is admirably expressed. The author bases his lectures on scientific, psychological as well as physical facts, and also calls on the maternal and paternal instincts for the control and proper physiological application of the sexual functions.

The information contained in this book can very well be drawn upon by the physician to assist him in the instruction on sex hygiene when such requests are made in the privacy of his office.

SAMUEL ZWERLING.

Spinal Anesthesia

LUMBALANASTHESIE IN DER GEBURTSHILFE UND GYNAKOLOGIE. By Dr. Ernst Preissecker. Wien, Wilhelm Maudrich, 1934. 76 pages, illustrated. 8vo. Cloth, RM. 7.50.

The contents of this little volume are, briefly, as follows:

1. History of spinal anesthesia.
2. The biochemistry of the cerebro-spinal fluid.
3. Pharmacology of the substances used for spinal anesthesia.
4. Technique of lumbar puncture and injection.
5. Spinal anesthesia in obstetrics and gynecology.
6. Effect of spinal anesthesia on metabolism.
7. Summary and conclusions.

It would seem to the reviewer that the title of this book viz.—"Spinal Anesthesia in Obstetrics and Gynecology," is a misnomer; for, of the entire book only four pages are devoted to the use of spinal anesthesia in gynecology, and fourteen pages to its use in obstetrics. The rest of the volume is foreign to the title. In those few pages the author sings the praises of Spinal Anesthesia in obstetrics. Fortunately, not many obstetricians in this country will take up the refrain.

By far the most important and worthwhile chapter in the book is, "The Biochemistry of the Cerebro-spinal

Fluid." That the position of the patient has no relation to the dissemination of the anesthetic upwards or downwards, may have been stated by others; but this author bases his conclusions on experimental proof. Also, that the toxicity of the anesthetic occurs through the blood circulation by osmosis from the spinal canal, and is directly proportional to the permeability of the latter.

That certain drugs will increase or diminish the permeability of the spinal canal, is another important fact, proved experimentally. Thus, caffeine will cause the former, while calcium will do the latter. Morphine and scopolamine, according to the author, are always harmful and sometimes positively dangerous, when used in conjunction with spinal anesthesia.

This chapter is excellently written, well illustrated, and much of it is based on original research. It is too bad that it was hooked up in this volume with a few hackneyed and unconvincing subjects. It deserves an important place in any large volume on anesthesia.

J. HALPERIN.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

DIE HAUT- UND GESCHLECHTSKRANKHEITEN. Eine zusammenfassende Darstellung für die Praxis. By Prof. Dr. Leopold Arzt, Wien, and Prof. Karl Zieler, Würzburg. Berlin & Wien, Urban & Schwarzenberg, 1934. 4to, Lfg. 18/19, paper RM 21.40, Lfg. 20, RM 12.50.

RESEARCHES IN CANCER: Part I [1896-1921; 1922-1932]. By Caleb Wyand Geeting Rohrer, M.D. Baltimore, The Brentwood Printing Co., 1934. 8mo, 142 pages, illustrated. Cloth, \$5.00.

SCULPTURE IN THE LIVING. Rebuilding the Face and Form by Plastic Surgery. By Jacques W. Maliniak, M.D. New York, The Lancet Press, 1934. 8mo. 203 pages, illustrated. Cloth, \$3.00.

RUSSIA, YOUTH, AND THE PRESENT-DAY WORLD. Further Studies in Mental Hygiene. By Frankwood E. Williams, M.D. New York, Farrar & Rinehart, Inc. [c. 1934]. 8mo. 270 pages, illustrated. Cloth, \$2.50.

BODY MECHANICS IN THE STUDY AND TREATMENT OF DISEASE. By Joel E. Goldthwait, M.D. et al. Philadelphia, J. B. Lippincott Co., 1934. 8mo. 281 pages, illustrated. Cloth, \$4.00.

SALT, WATER & HEALTH. By Frederick Hoelzel. Chicago, Frederick Hoelzel, 1934. Octavo, 32 pages. Paper, 50 cents.

SKIN DEEP. The Truth About Beauty Aids—Safe and Harmful. By M. C. Phillips, of Consumers' Research. New York, The Vanguard Press [c. 1934]. 8vo. 254 pages. Cloth, \$2.00.

ANAESTHESIA AND ANALGESIA IN LABOUR. By Katharine G. Lloyd-Williams, M.D. Baltimore, William Wood & Co., 1934. 12mo. 96 pages, illustrated. Cloth, \$2.00.

THE TREATMENT OF COMMON FEMALE AILMENTS. By Frederick John McCann, M.D. Third Edition. Baltimore, William Wood & Co., 1934. 8mo. 379 pages. Cloth, \$4.75.

THE TREATMENT OF INJURIES OF THE HEAD AND SPINE. By Jewett V. Reed, M.D. Indianapolis, C. E. Pauley & Co., Inc. [c. 1934]. 8vo. 96 pages, illustrated.

THE TECHNIQUE OF CONTRACEPTION. An Outline. By Eric M. Matzner, M.D. Second Edition. Baltimore, Williams & Wilkins Co., 1934. 8vo. 38 pages, illustrated. Paper, 50 cents.

OLD AGE MEDICALLY CONSIDERED. A Series of Papers by Medical Authorities on the Physical and Dietetic Treatment of Diseases and Disabilities of Old Age. With a foreword by R. King Brown, M.D. London, Actinic Press, Ltd., 1934. 8vo. 96 pages, illustrated. Paper, 3 shillings.

STANDARD CLASSIFIED NOMENCLATURE OF DISEASE. Compiled by The National Conference on Nomenclature of Disease. Edited by H. B. Logie, M.D. New York, The Commonwealth Fund, 1935. 8vo. 870 pages. Cloth, \$3.50.

THE CLINICAL ASPECTS OF VISCERAL NEUROLOGY. With special reference to the surgery of the sympathetic nervous system. By W. K. Livingston, M.D. Springfield, Ill., Charles C. Thomas [c. 1935]. 4to. 254 pages, illustrated. Cloth, \$8.50.

THE HUMAN MACHINE. Its Uses and Abuses. By Lorena M. Breed, M.D. 12mo. 101 pages. Cloth, \$1.50.

PRACTICAL ENDOCRINOLOGY. Symptoms and Treatment. By Max Goldzieher, M.D. New York, D. Appleton-Century Co. [c. 1935]. 8vo. 326 pages, illustrated. Cloth, \$5.00.